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The Journal of the Maine Medical Association

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Number 1

The Setting Up Of A Cardiac Clinic In Industry

NILES L. PERKINS, JR., M.D.*

This paper is a preliminary report dealing with the problems encountered in the setting up of a Cardiac Clinic in an industrial Maine community of 15,000 people located 45 miles from the nearest large city. The fact that this community is relatively isolated and has only one major employer, lends itself very adequately to an epidemiological study of disease. Under these circumstances the onset, course, duration and termination of many diseases may be followed very closely as one is dealing with only a few doctors, one hospital, and one place of employment. Once an individual comes down with a disease in such an area, it is far more difficult for him to move out of the area or find another job. He thus becomes more and more dependent upon the local industry to give him work even in his then more debilitated physical or mental condition. All of these factors combine to give a laboratory-like situation in which to initiate an epidemiological study.

The original theme of this paper was to be an investigation and evaluation of the many employees in this one industrial plant who had developed a proved myocardial infarction and had slipped away from medical control and returned to heavy labor. It was noted about three years ago, during routine medical examinations at this plant, that a large number of employees with so-called previous heart attacks were working at jobs requiring great physical exertion. Men who had histories of previous attacks, proved by hospital case records and positive Electrocardiograms, were pushing rolls weighing 3,600 pounds, handling sticks of hardwood weighing 100 to 400 pounds, working 36 or even 48 hours at a stretch without sleep, supervising jobs that required walking up and down miles of stairs daily

and even running high speed machinery which required the lifting of 150 to 300 pound shafts, bending and climbing over spinning rolls, etc. Now this did not mean all employees with heart attacks had been able to return to this heavy work following their acute episodes, but certainly many of them had. It was for a better evaluation of this clinical material that the idea of the Cardiac Clinic was evolved, and despite lack of technical help, and money to pay such help, the undertaking has achieved relatively good success. Some of the problems as indicated above which required investigation are enumerated below:

1. Investigation of plant and hospital records to find all cases of employees with previous heart attacks.
2. Study of the insurance death certificates in light of critical medical appraisal of cause of death.
3. Investigation of each individual's hospital record and EKG's for proof of a myocardial infarction.
4. Complete physical examinations on all employees still working in the plant with histories of heart attacks.
5. Detailed study in each case of job progression.
6. Determination of the physical requirements of each job involved.

Although much of this work still remains to be accomplished, there were many good reasons why the Cardiac Clinic in industry was a worthwhile innovation even though the problems involved in its establishment at times seemed insurmountable. These other reasons were:

1. There was considerable apprehension about heart disease among our employees because of a number of sudden deaths in the community involving men as young as 28 years of age. In a relatively small com-

*Medical Director, Oxford Paper Company, Rumford, Maine.

munity, this type of information is rapidly and widely publicized causing many to wonder — who will be next? This apprehension showed itself by numerous requests for physical examinations both in the plant and to the other doctors in the area. A person in this frame of mind is a poor workman, both as to efficiency and as a safety risk. As a citizen he is equally inadequate because of his inability to participate in extra-curricular activities for the good of his community.

2. There was an increasing concern on the part of Management due to the large number of cardiacs working in the plant and an increasing resistance against allowing afflicted employees to return to work because of fear of possible increases in safety hazards and compensation liability. A block at this point would have cut off financial support for these individuals and thrown them back on disability pensions, unemployment, state rehabilitation programs and finally the town or state Welfare Departments.

3. There was a definite lack of specialists in the area to aid in evaluation of these patients. Consultations would have been helpful in the treatment of difficult cases and in prognosis of working ability. A Cardiac Clinic was held at the hospital but the interval between clinics, and the long wait to see the Cardiologist were a deterrent to its effectiveness.

4. There was a desire on the part of the Industrial Physician in this area to initiate a positive preventive medical program in the Industry. This required the referring of problem cardiac patients picked up through routine pre-employment, return from illness, work transfer, toxic hazard, and employee check-up physical examinations, to such a clinic for early diagnosis. It was felt that employees who could receive early treatment of their problems would have shorter periods of disability. Therefore, there would be less financial burden on the man and his family and his period of efficient productivity would be increased.

5. Such a clinic would tend to improve the general quality of treatment for the cardiac patients locally because it would be used as a training program for interested doctors. This is not to suggest that cardiac care was not adequate but that the new ideas from the various specialists would help to keep many of us up to date with modern trends as they develop.

Now it might appear on the surface that the above factors would all be required to sell a clinic. One would have to be directly connected with industrial medicine to realize the problem of selling this program to three completely separate groups of individuals, all with varying ideas, purposes and commitments.

First Management had to be convinced that the Clinic was a good idea and that it would be beneficial to employees as well as Management. They firmly requested that it must not interfere with a program of Labor or Public Relations. There should be no Union control of the clinic and there should be no unreasonable expense to the Company except for the use of the Medical

Department, its present staff and equipment and if held on Company Time, employees should not be held up too long from their work.

Secondly the Union itself had to be sold that the employees would be benefited directly and that the clinic would not under any circumstances become a tool of Management to lay-off or discharge employees. They finally agreed to the Clinic with the following reservations:

1. All clinic records should be strictly private and not included in the Medical Department files.
2. No man should be laid off or fired from his job under any circumstances from information picked up at the clinic.
3. Attendance at the Clinic must be completely voluntary.
4. The employee must have complete independence as to treatment.

Finally after these two parties were in agreement the doctors in the area had to be assured that:

1. The Clinic would be opened to the patients of any doctor.
2. The doctors would be welcome to come to the Clinic whether it was just to observe, to learn or to have one or several of their patients evaluated.
3. The Clinic must be diagnostic only and suggestions as to the treatment given directly to the family doctor.
4. All patients must be referred directly back to the family doctor and not sent on to a specialist for treatment unless the family doctor was in full agreement.
5. Attendance at the Clinic must be completely voluntary and no patients to be coerced to attend.

Finally when all parties were nearly in agreement, the biggest problem arose. Who should control and run such a Clinic and who would pay the specialists? It was at this point that the Maine Heart Association stepped in as a neutral but interested party and agreed to control and run the Clinic as a research project. They agreed to the criteria set-up by Management, the Union and the local doctors and for a period of one year, to send specialists to the Clinic on a trial basis.

The mechanics of conducting the Clinic were as follows:

1. 1569 employees were screened through routine examinations at the Plant Medical Department with chest X-rays, E.K.G.'s, Urinalyses, complete histories and physical examinations.

- a. This included up-to-date examinations on all known cardiacs, diabetics, hypertensives and those with arteriosclerotic disease of their extremities.
- b. We also included as many apprehensive employees without histories of disease as it was possible to examine. All the employees with positive findings were then advised, according to the results of this screening examina-

tion, to either return to their family doctors for further diagnosis and/or treatment or that no disease was found and they were in good health.

2. All doctors in the area were contacted and asked to send in any employee they would like to be evaluated at the Clinic. Occasionally an employee under the care of those outside the medical field was advised that the clinic was available and they could attend if they so desired. Certain doctors also gave the Medical Director a free hand and advised him to bring any of their personal patients into the Clinic whenever he felt it necessary. However, most of the patients seen in the Clinic came from direct referral by their family doctors. Since most of these employees had had previous examinations in the Medical Department or at the local hospital, E.K.G.'s, X-rays, histories and physical examinations were all available in as complete a form as possible for study on the Clinic day.

3. The doctors in the immediate area were invited to the Clinic to observe, aid in running the Clinic, or to have one or several of their patients examined by the Cardiologist.

4. The Clinic was held monthly in the Medical Department of the plant making use of the staff and equipment.

5. A Cardiologist was assigned to the Clinic on a monthly schedule by the Maine Heart Association.

6. Each patient was studied by all doctors as a unit and the cases discussed and recommendations given directly to the family doctor. Records were kept of each case and filed separately from the employee's routine medical history.

Now, as is so many times the case, obstacles which we expected to be the toughest solved themselves simply, but those that we did not foresee or felt minor gave us the most trouble.

There was marked apprehension originally that because the Clinic was to be held in the Medical Department of the plant and attendance was to be strictly voluntary, only a few would attend. At our first Clinic 256 employees stormed the doors and it was necessary for many to be turned away with the agreement they would be called back later. Sixty-four patients were screened that day by the two Cardiologists and three other doctors who were present. At our following Clinics only six or eight patients were picked out of the available clinical material. However, during the last months of the Clinic, clinical material became less and less available as the number of men developing heart attacks dropped from a normal 50 employees per year down to 15 men. Whether this was due to the extensive screening examinations and urging employees to go to their family doctors for early treatment, or just chance, is hard to say. During the preliminary screening seven new Diabetics were found, 66 employees were found with hypertension over 160 systolic or 100

diastolic. Seven employees were found to have lung tumors and were referred for further treatment.

The restrictions concerning records, or taking men off their jobs if they were in poor physical condition or on jobs requiring too much physical exertion, were no problem. All patients, with the exception of one, cooperated fully as to treatment or to recommendations for further hospitalization since this directive came from their family doctor.

No one complained that the Clinic was taking undue advantage of them and the Union had only praise for the work done.

The biggest problem encountered was in transferring advice from the specialists to the family doctor when he was not present at the Clinic during the examination of one of his patients. This created some antagonism even when it was reported as a suggestion by the specialist. This was never a problem when the doctor was present at the Clinic. It is hoped that this can be handled by some better method in the future. It is encouraging, however, to note that many of the doctors who took only a minor interest in the Clinic last year are now referring patients to the Clinic even though it was discontinued last January. It is also encouraging that several Medical Journals, Newspapers and Union Magazines have requested information on the Clinic as they feel it would be of interest to their readers.

SUMMARY

It is difficult at this time to give concrete results of this experiment as they extend far beyond the basis statistics, but this much is definite:

1. Many employees received timely expert medical diagnosis and their family doctors new suggestions for treatment of their patients cardiac conditions.
2. Many employees were allowed to return to their own work, who probably would have been severely restricted.
3. Many frightened employees, after thorough physical examinations were assured that they were in good physical condition and returned thankfully to their jobs.
4. Several employees originally diagnosed to have Cardiac conditions were completely cleared and allowed to return to work.
5. Many employees were benefited by the finding of other disease conditions for which they received early treatment by their family doctors.
6. There was considerable improvement in employee, Medical Department, and local doctor Medical Department relationships which has made for better cooperation all around.
7. Management and the Labor Union, with the help of the Maine Heart Association, were able to work out a Medical Program directly benefiting all employees.

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Prochlorperazine In A Psychotic Geriatric Group

CHARLES ROTHSTEIN, Ph.D.* AND SALVATORE P. LACERVA, M.D.**

INTRODUCTION

Prochlorperazine, marketed by Smith, Kline, and French under the trade name Compazine®, is a relatively recent addition to the realm of tranquilizing drugs. Considered to be more potent per milligram than chlorpromazine, it is claimed to have more desirable tranquilizing effects than the latter with fewer undesirable side reactions. Any drug fulfilling these claims would be a welcome addition to the armamentarium of drugs, particularly for use in the psychotic geriatric group where behavioral control is needed with a minimum of deleterious side effects.

The present study was designed to systematically evaluate the effects of varying dosages of Compazine on the behavior of chronic psychotic geriatric patients. To the investigators' knowledge, there have been surprisingly few systematic studies of the effectiveness of the newer tranquilizing drugs in hospitalized psychotic geriatric groups. The increasing proportion of geriatric patients in mental hospitals points out the need for more research in this area.

A perusal of the literature reveals that most drug studies rely upon clinical judgment to evaluate the effectiveness of a given medication. While clinical judgment is undoubtedly a valuable tool to be used in the preliminary analysis of research results, it is too susceptible to biases to be accepted as the final criterion of a drug's effectiveness. The present investigators believed that a more objective analysis of behavioral change during drug therapy was required. To this end a rating schedule was devised which was scored daily by nursing aides, a group who would appear to be in the best position to note daily changes in patients' behavior. A double-blind experimental design was employed in this study; neither patient nor rater knew the nature of the study medication. In addition, a placebo was included in the study to further reduce the possibility that the attitude of personnel toward "drug giving" would influence the ratings of behavioral change. While we felt that personnel's and patients' attitudes toward drugs do play a significant role in the

effectiveness of drugs, we desired to assess primarily the pharmacological contribution of the drug to changes in patients' behavior. The study was also designed in a manner that would enable us to use each patient as his own control in evaluating the effectiveness of the placebo and of the varying dosages of Compazine.

SUBJECTS AND PROCEDURES

The initial study population consisted of forty-seven (47) patients selected from a chronic treatment ward. Of these forty-seven patients, nineteen (19) had a diagnosis of chronic brain syndrome and twenty-eight (28) carried a diagnosis of schizophrenic reaction. This group ranged in age from thirty-eight (38) to seventy-eight (78) years with the average age 63.5 years and the median age sixty-four (64) years. The average length of hospitalization for this group was 15.2 years.

Eight experimental conditions were employed in this study. Prior to the start of the study all patients were removed from whatever medication they were receiving, for a period of three weeks. At the end of this drug withdrawal period, all patients were rated by the nursing aides on a rating sheet which established a base line score for each patient under a no-drug condition (experimental condition I, hereafter referred to as the Observation Period). The Observation Period consisted of scoring each patient daily on sixteen dimensions for a period of ten days. The dimensions were defined by the investigators and each nursing aide was trained to score the patients according to the definitions (see Table I). Each experimental condition lasted for ten days and ratings were obtained daily on all patients on all sixteen dimensions. Each experimental condition score was obtained by summing the daily scores for that ten-day period. This observation period score provided the criterion score for comparing all scores obtained by the patients during the other seven experimental conditions.

Experimental drug conditions II and III consisted of a twenty-day period of placebo medication (ten days for each period). Experimental condition IV consisted of ten days of the administration of 75 mg. Compazine per day (25 mg. TID). Conditions V and VI consisted of a total of twenty days of the administration of 150 mg. of Compazine daily (50 mg. TID). Experimental Condition VII consisted of a ten-day

From the Veterans Administration Center, Togus, Maine.

*Clinical Psychologist, Neuropsychiatric Section.

**Formerly Assist. Director, Professional Services, Neuropsychiatric Section; presently Director, Professional Services at VAH, Perry Point, Maryland.

TABLE I

DEFINITIONS OF DIMENSIONS RATED	
DIMENSION	DEFINITION
1. Seclusive	Keeping to one's self — not mixing with others.
2. Angry	One who looks or acts mean or ill-tempered.
3. Irritable	Impatient, easily excitable, fretful, touchy.
4. Overtalkative	Talks more than is necessary.
5. Untidy	Not neat, careless in dress and manners.
6. Indifferent	Does not seem to be interested in what is going on around him.
7. Undertalkative	Talks very little, does not start conversations.
8. Delusional	Having false ideas which cannot be changed by logic or common sense.
9. Hallucinated	Seeing, hearing, smelling, tasting, or feeling things which do not exist.
10. Cheerful	Contented, satisfied, responds in warm friendly fashion.
11. Depressed	Down in the dumps, blue, sad.
12. Cooperative	Cooperates with others without urging.
13. Noisy	Making of loud sounds either by voice or action.
14. Overactive	Moves about more than is necessary, active.
15. Underactive	Moves only when necessary.
16. Manneristic	Makes strange movements or gestures.

period of the administration of 225 mg. of Compazine (75 mg. TID). Experimental Condition VIII consisted of a return to the administration of 75 mg. of Compazine daily (25 mg. TID).

In addition to utilizing the double-blind approach, the placebo pills were administered in varying dosages so that when the Compazine was introduced and the necessary buildup of medication instituted, the staff was unable to differentiate this pattern of medication from that of the placebo.

At the end of this study each patient had eight scores on each of the sixteen dimensions, one for each of the experimental conditions. The scores were compared across the eight experimental conditions using the observation period scores as the criterion scores against which to compare the scores obtained under the other seven experimental conditions. In this manner, each patient is used as his own control. Owing to the nature of the comparisons, the sixteen dimensions are treated separately in the statistical analysis.

In addition to obtaining scores on the basis of the rating scale, nurses' notes were kept on each patient so that clinical data could be reviewed at the completion of the study. Routine blood work was done once monthly to alert the staff to the possible development of side reactions to the drug. The daily routine of the patients was not purposefully changed in any way and

aside from the introduction of the study medications, an attempt was made to change the usual environmental milieu as little as possible. The only restriction was that no tranquilizing or sedative medication, aside from the study medication, could be administered to the patients.

RESULTS

A. Statistical Analysis

The results of this study are summarized in Table II. The eight figures opposite each dimension represent the mean scores of the groups obtained during the various experimental periods. The means for each dimension are compared to the observation period mean for that dimension. The statistical method employed was analysis of variance for matched groups. Improvement is indicated by a decrease in the mean score, except for the dimensions Cheerful and Cooperative where an increase in mean score denotes improvement. Means marked by a single asterisk differ from the observation mean at the .05 level of chance; means marked by a double asterisk differ from the observation mean at the .01 level of chance.

It was found that of the sixteen dimensions rated, eight (Angry, Irritable, Overtalkative, Delusional, Cooperative, Noisy, Overactive and Manneristic) were significantly affected by one or more of the experi-

TABLE II
MEAN SCORES FOR EACH DIMENSION FOR ALL EXPERIMENTAL PERIODS

Dimensions	Mean Scores							
	Observation Period (1)	Placebo (2)	Placebo (3)	75 mg. Comp. (4)	150 mg. Comp. (5)	150 mg. Comp. (6)	225 mg. Comp. (7)	75 mg. Comp. (8)
Seclusive	29.89	29.80	29.94	30.00	28.91	28.94	29.66	30.00
Angry	24.85	22.28	**	**	**	**	**	*
Irritable	23.83	24.33	23.05	**	**	**	**	*
Overtalkative	26.18	23.87	23.50	**	**	**	**	*
Untidy	27.25	26.56	26.25	25.87	26.03	26.31	26.28	26.56
Indifferent	28.72	27.16	23.77	23.88	24.27	24.00	25.00	25.00
Undertalkative	29.14	27.85	25.71	27.92	26.35	26.42	27.07	26.57
Delusional	26.92	25.53	26.38	22.53	22.30	*	22.46	22.61
Hallucinated	27.57	26.15	27.94	24.42	25.73	24.36	25.26	25.26
Cheerful	10.43	10.57	12.43	11.77	12.14	13.14	12.46	12.71
Depressed								
Cooperative	10.42	10.61	12.90	13.66	*	**	*	*
Noisy	25.83	24.38	22.72	**	**	**	**	**
Overactive	29.40	26.90	26.00	**	**	**	**	*
Underactive	28.39	27.30	24.91	25.13	25.30	25.69	26.13	26.78
Manneristic	29.74	28.48	*	**	**	*	*	*

* Differs from observation mean at .05 level

** Differs from observation mean at .01 level

mental conditions. Seven dimensions (Seclusive, Untidy, Indifferent, Undertalkative, Hallucinated, Cheerful, and Underactive) showed no change during the study. The dimension, Depressed, was not analyzed statistically, owing to the lack of sufficient cases in that category.

In those cases where significant positive changes occurred, 75 mg. of Compazine a day proved to be the optimal dosage, save on the Delusional and Cooperative dimensions where the optimal score was achieved during the administration of 150 mg. of Compazine daily.

Scores on two of the behavioral variables (Angry and Manneristic) were significantly changed by Placebo administration. However, in the Angry dimension the administration of 75 mg. of Compazine daily produced a significant drop in score beyond that produced by the Placebo alone. On the Manneristic dimension 75 mg. of Compazine was as effective as the Placebo in reducing the score.

While it may be noted in Table II that scores obtained during the administration of dosages larger than 75 mg. per day, also differed significantly from the observation period scores, on several dimensions, in no

cases were these differences significant when compared to the scores obtained during the administration of 75 mg. of Compazine. In fact, on three categories (Angry, Irritable and Overtalkative) the mean scores obtained during the administration of larger dosages of Compazine significantly increased when compared with the scores obtained during experimental condition IV — 75 mg. of Compazine.

B. Clinical Observations

Fourteen patients had to be discontinued from this study owing to the development of side reactions to the Compazine. Ten patients were discontinued while receiving 225 mg. of Compazine daily and four were dropped from the study while receiving 150 mg. of Compazine daily. One or more of the following symptoms were present in those patients who had to be dropped from the study: weakness, pallor, lethargy, edema, abdominal distention, and swallowing difficulties. The outstanding symptoms seen in the majority of affected patients were lethargy and weakness. These patients were treated with Artane® which controlled these symptoms to some extent but it was thought ad-

visible by the ward physician to discontinue the study medication on these patients.

These side-reactions proved to be disquieting to the ward personnel as they were not aware of the nature of the study medication and tended to overelaborate the symptoms. Owing to the development of the symptoms, the ward personnel's impression of the drug's effectiveness was quite different from the impression gained through the statistical analysis of the rating sheets. This apparently reinforces the earlier contention that clinical impressions may be misleading in terms of adequately evaluating the effect of a drug program. Clinical interpretations of a drug's effectiveness are often generalized from a few outstanding cases which provides something less than a true picture of what is happening to the group as a whole.

Throughout the study, there were no signs of agranulocytosis, blood dyscrasia, or hemoglobin disturbances. Although blood pressures were not taken routinely, periodic checks revealed no major shifts.

SUMMARY AND CONCLUSIONS

The present study was designed to evaluate the effect of various dosages of Compazine (between 75 and 225mg. daily) on the behavior of 47 chronic psychotic geriatric patients with a diagnosis of either schizophrenia or chronic brain syndrome. Sixteen dimensions were evaluated by means of a daily checklist filled out by psychiatric aides. Each patient served as his own control in evaluating the effects of the eight experimental conditions. A period of Placebo medication was also instituted in this study.

Of the sixteen dimensions evaluated, eight (Angry, Irritable, Overtalkative, Delusional, Uncooperative, Noisy, Overactive, and Manneristic) were significantly affected in a positive direction by one or more of the experimental conditions. Seven dimensions (Seclusive, Untidy, Indifferent, Undertalkative, Hallucinated, Cheerful, and Underactive) were unaffected by any of the experimental conditions. One dimension, depressed, was not analyzed owing to lack of sufficient data. In the majority of cases where significant positive changes occurred, 75mg. of Compazine daily proved to be the optimal dosage. Two behavioral dimensions (Angry and Manneristic) were significantly affected by Placebo alone but in neither case was Placebo more effective than 75mg. of Compazine. This would seem to suggest that while a Placebo effect can be shown to occur, this effect can be differentiated from the pharmacological contribution of an active drug.

Fourteen of 47 patients were dropped from the study owing to side reactions occurring during the higher dosage levels of Compazine. Ten patients were

discontinued while receiving 225mg. of Compazine daily and four were discontinued while receiving 150mg. of Compazine daily. One or more of the following symptoms were observed in the patients dropped from the study: pallor, weakness, edema, abdominal distention, and swallowing difficulties. No signs of agranulocytosis, blood dyscrasia, or hemoglobin disturbances were noted.

It appears, then, that on the basis of this study 75mg. of Compazine daily is effective in changing behavior that may best be characterized as reflecting psychomotor hyperactivity. Compazine appears to be contraindicated in those patients whose outstanding behavioral symptoms reflect psychomotor retardation. Dosages larger than 75mg. of Compazine daily appear to be contraindicated in a geriatric population as they produce no better results than the lower dosage while running the risk of producing undesirable side reactions. It is also possible that had dosages less than 75mg. per day been used, these levels might have produced changes as significant as those produced with 75mg. of Compazine daily.

The study also seemed to show that clinical evaluation of a drug's effectiveness for large groups of patients can be biased by the occurrence of outstanding effects in a few patients. This would suggest that evaluations during drug studies be conducted by means of objective rating devices relatively unaffected by personal biases.

One should note that these results are based on group data, suggesting that prescriptions should remain an individual matter, with the group data providing rough guidelines for the physician. Likewise, it should be noted that the behavioral changes interpreted in this study as being in a positive direction may not, in some theoretical systems, be construed as improvement.

In retrospect it is felt that the utilization of a latin square design would have been desirable so as to partial out the possible cumulative effects of the drug during the experimental conditions.

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The Use Of Prochlorperazine In Surgery

TIMOTHY A. LAMPHIER, M.D.*

Emotional distress and nausea and vomiting may cause the surgical patient more distress than the primary disease and, despite expert care, can convert into a failure an otherwise successful operation. Even with improved management, for example, postoperative vomiting still occurs in about one-fourth of all patients receiving general anesthesia.

Although ataractic agents have been used effectively to combat pre- and postoperative emotional distress and nausea and vomiting, certain untoward effects may sometimes preclude their use in surgery. Recent investigations, indicating that prochlorperazine, a phenothiazine derivative, is an effective and relatively nontoxic antiemetic and ataractic agent, prompted this study of its efficacy in relieving pre- and postoperative apprehension, nausea, and vomiting.

METHOD

The 20 patients chosen for this study - six men and 14 women between the ages of 21 and 73 years — exhibited preoperative or postoperative symptoms of mild-to-severe anxiety (apprehension, nervousness, and restlessness), nausea, or vomiting in conjunction with such procedures as hysterectomy (four patients), herniorrhaphy (four patients), cholecystectomy (three patients), appendectomy (two patients), laparotomy (two patients), radical mastectomy (one patient), venous ligation (one patient), coccygectomy (one patient), hemorrhoidectomy (one patient), and dilation and curettage (one patient).

The usual preoperative dose of prochlorperazine (10 mg.) was given intramuscularly at bedtime or once every three or four hours for two doses on the day prior to operation with routine preoperative medication (50 mg. of Demerol® every four hours). Postoperatively, prochlorperazine was given in 10 mg. intramuscular doses every three to five hours for one to five days. Prior to and during therapy with prochlorperazine, routine complete blood counts and urinalysis were performed. All patients in the study received the same pre- and postoperative medication and were followed throughout their hospital course by the same observers.

RESULTS

This study showed prochlorperazine to be effective in

relieving or preventing pre- or postoperative nausea, vomiting, and symptoms of anxiety. Eighteen of the 20 patients (90 per cent) obtained excellent results — complete relief of anxiety, nausea, and vomiting; only two patients failed to benefit and had to be kept under narcotic medication.

The most effective intramuscular dose of prochlorperazine was 10 mg. given every four hours; the effects of a single dose seemed to last four to six hours. The ataractic effects were usually noted after the patient had been taking prochlorperazine for 24 hours; by this time they appeared relaxed, well rested, and cooperative. Prochlorperazine greatly reduced pre- and postoperative tension and anxiety, agitation, apprehension, and irritability, even in the most nervous patients.

After preoperative treatment with prochlorperazine, the patients usually arrived in the operating room free of apprehension and with very few signs of central depression. By calming them or perhaps by producing greater muscular relaxation, and decreasing reflex irritability, prochlorperazine facilitated intubation and induction of anesthesia. It also appeared to be a good muscle relaxant for administration of spinal anesthesia and aided in bronchoscopy.

The patients passed calmly through the excitement stage of anesthesia, and most of them appeared to be tranquil and comfortable on emergence from anesthesia. Moreover, there was no long period of unconsciousness after surgery when prochlorperazine was used as premedication. The majority of the patients were able to retain solid food and to get out of bed on the day after operation. The postoperative course was speedier and smoother and, with anxiety under control, the patients cooperated more readily with the house staff and thus were easier to care for and to rehabilitate. Concomitant use of pre- and postoperative sedatives was usually unnecessary, and in general much smaller amounts of narcotics, analgesics, and anesthetics — much less than usual — were used. The patients remained alert during the day but slept soundly at night without needing hypnotic drugs. One distinct advantage was that all other postoperative medication, such as narcotics and sedatives for postoperative pain, could usually be discontinued after the first postoperative day; the majority of patients required narcotics only once during the postoperative period.

Postoperative nausea was practically never seen, and preoperative nausea was relieved within 30 to 40 min-

* Surgeon-in-Chief, Central Hospital, Somerville, Massachusetts.

Fractures Of The Elbow In Children*

LAWRENCE CRANE, M.D.

In the few short years that I have been exposed to teaching interns and residents, I have been impressed with the problems which arise from injuries to elbows in children. We all stand in awe of the fractured elbow in children and rightly so, because of

1. the many epiphyseal centers in the elbow which make it difficult to read and interpret the x-ray.
2. the possible growth disturbances that occasionally occur with these fractures, and
3. the possibility of circulatory damage which follows some of these fractures.

Very few fractures in children require open reduction. Over-riding of a half an inch in femoral fractures and even more in fractures of the humerus are perfectly acceptable. Moderate angulations, however, are not, particularly if the angulation is in the middle third of the bone. These can usually be corrected by closed reduction. Moderate to severe angulations close to the epiphyseal lines will often correct with growth. Elbow fractures require more open reductions than any of the other fractures in children. It is a great help to see the normal elbow before considering the abnormal one and inasmuch as the normal changes from year to year in children, x-rays of the opposite elbow must be obtained.

Figure 1. shows the normal elbows of a 1, 5, 10, and 15 year old. It is possible to fracture any of these epiphyseal lines without displacing the epiphysis, but the treatment is extremely simple and a posterior molded splint with the elbow at right angles will give no untoward effects.

A fall on the outstretched arm of a child may result in a fracture of the radial head, the capitellum, or the supracondylar area. Radial head fractures can have considerable angulation and the patient will still end up with a good elbow. If, however, the head and neck are completely off or are angulated more than 30 to 40 degrees, the elbow should be opened and the head replaced. Figure 2. shows the x-rays of a 16 year old boy who sustained an injury to the radial head. Although it would have been acceptable to remove the radial head, it was easily replaced and therefore this was done without internal fixation. A year later he was asymptomatic with full elbow motion. Some men have advocated a Kirschner wire through the radial head to hold it in place, but we have had good

luck by merely placing it in its proper position and holding it with several silk or catgut sutures.

Fractures of the capitellum, in like manner, if displaced should be openly reduced. These can be held either with a nail as in this young boy's case, (Figure 3.) or with silk or catgut. This degree of displacement might have done satisfactorily without an open reduction. Open reduction, however, prevented further separation and allowed for early active motion. Figure 4. is a similar fracture in a one year old which did well with a posterior molded splint.

Fractures of the medial epicondyle associated with dislocations or subluxations are another group that need special attention and quite frequently, although not necessarily, require an open reduction. Figure 5. is an example of such a problem. Gentle manipulation under a general anesthesia is indicated, but if unsuccessful, an open reduction should be done immediately. The medial epicondyle can usually be removed from the elbow joint without difficulty and tacked with suture or pin in its normal position. Special attention should be given to avoid damage to the ulnar nerve.

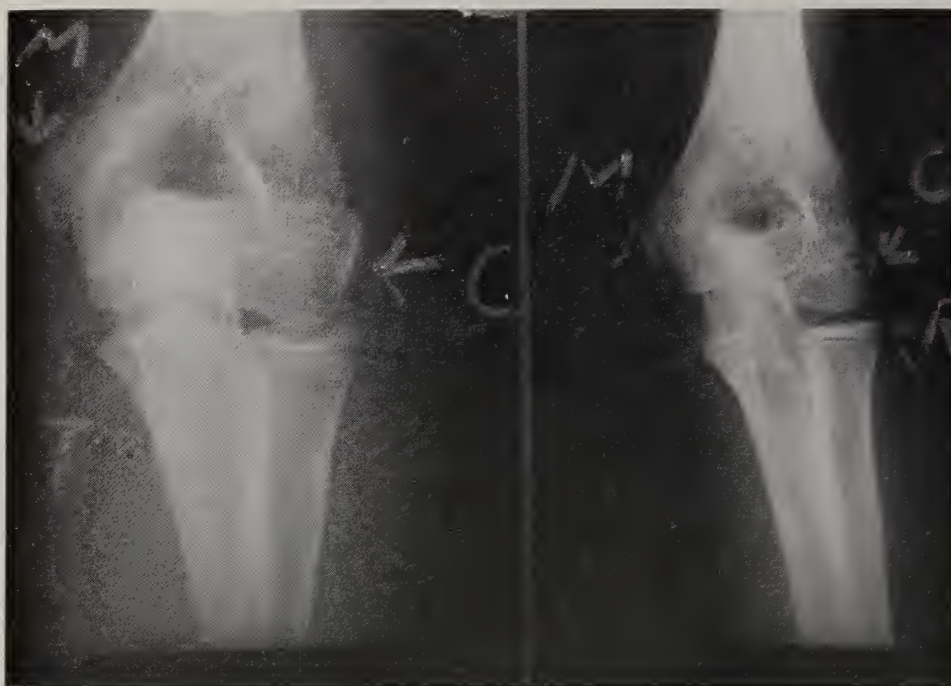
The straight forward medial epicondylar fractures do not as a rule need an open reduction. This is an apophysis rather than an epiphysis and therefore does not contribute to the growth of the forearm. Its real importance is the protection it gives to the ulnar nerve. If there are signs of ulnar nerve impingement with such a fracture, an open reduction is indicated and an exploration of the ulnar nerve is mandatory. Figure 6. is an example of a lad with temporary nerve palsy.

The Monteggia fracture is a fracture of the ulnar with a dislocation of the radial head. The dislocation of the radial head can be easily missed and if so one never gets a normal elbow. If the angulation of the ulna is anatomically reduced, the radial head, with few exceptions, will also reduce. Therefore, quite frequently an open reduction of the ulna is necessary in order that it be made anatomical. Figure 7.

Figure 8. is an x-ray of a 49 year old man who complained of pain and instability of the elbow. He gave a history of a fracture of the forearm as a child, stating that the elbow had never been quite right. The x-ray reveals dislocation and an underdeveloped radial head with arthritic changes in the joint. An excision of the radial head relieved some of his symptoms.

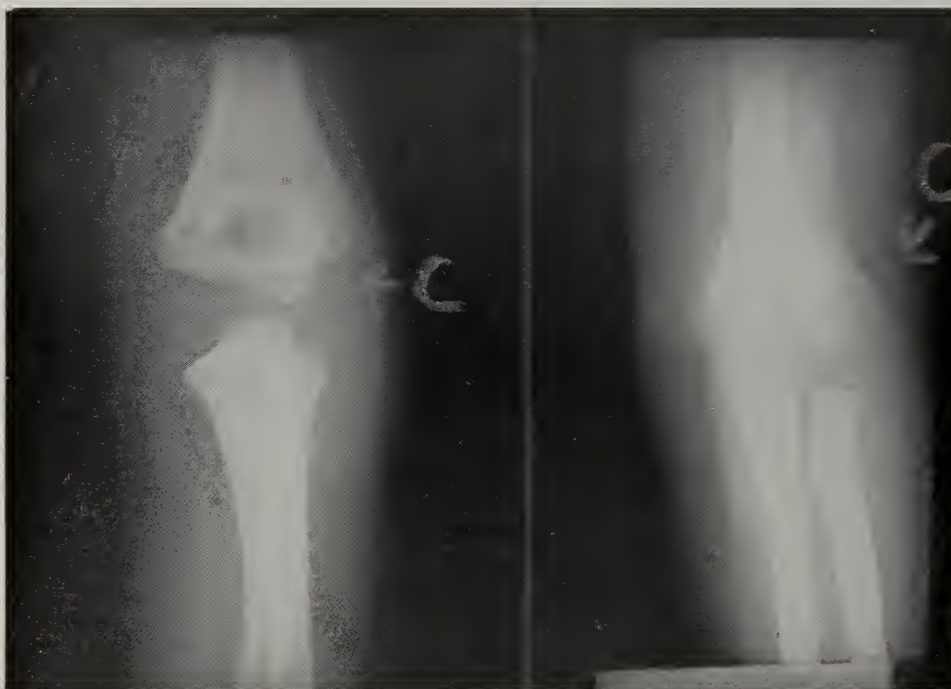
Supracondylar fractures on the other hand, do not usually require an open reduction. They can, however, be extremely difficult to reduce. And the complication

*Presented at the Fall Clinical Session of the Maine Chapter, American College of Surgeons at Lewiston, November 20, 1956.



AGE 15 YEARS

AGE 10 YEARS



AGE 5 YEARS

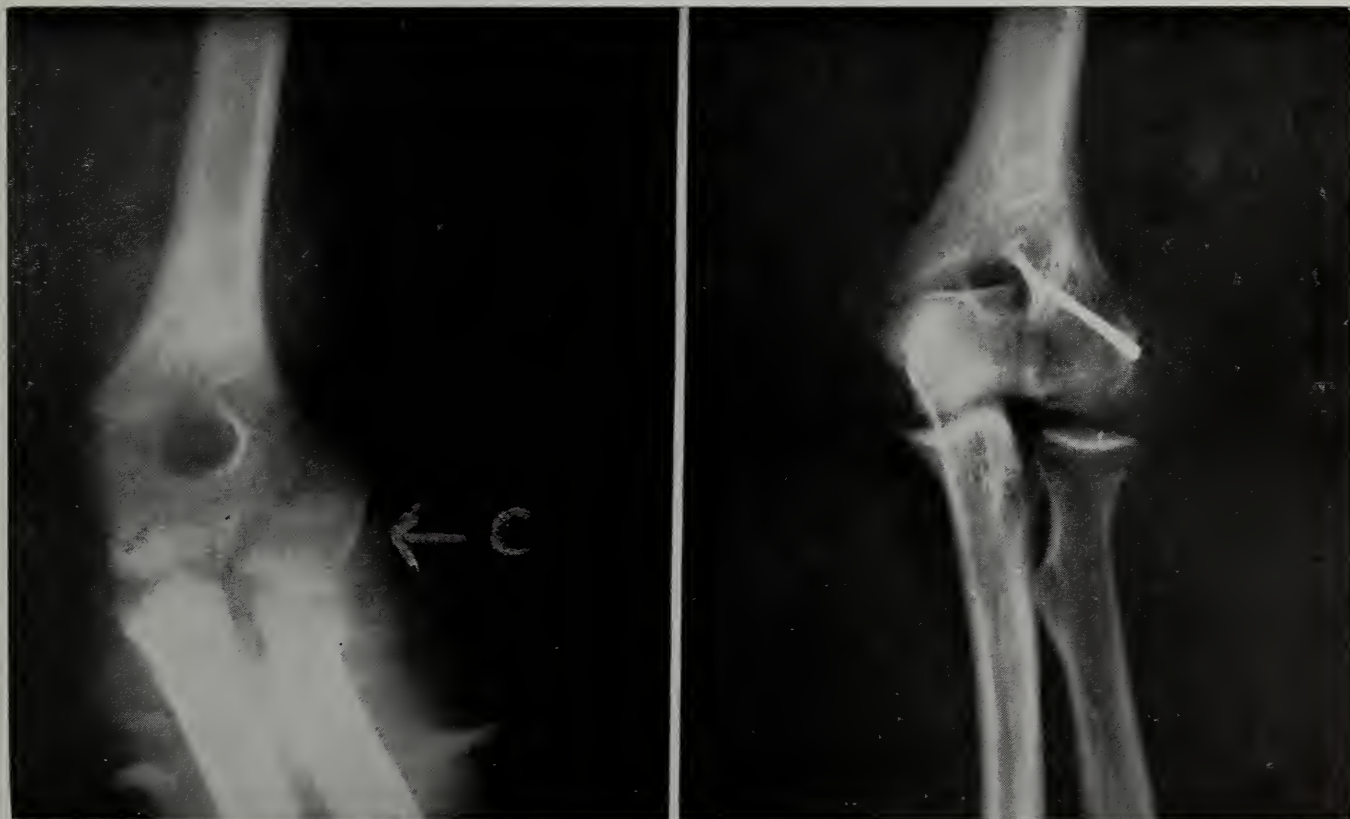
AGE 1 YEAR

FIG. 1. Normal elbows at different ages showing epiphyses.

C — Capitellum
R — Radial head
M — Medial Epicondyle
T — Trochlea



FIG. 2: Radial head (R) fracture replaced by an open reduction, held with several silk sutures in the periosteum.



A. Pre-operative

B. Two years following open reduction

FIG. 3: A 14 year old boy who sustained a capitella fracture involving most of the lateral condyle.

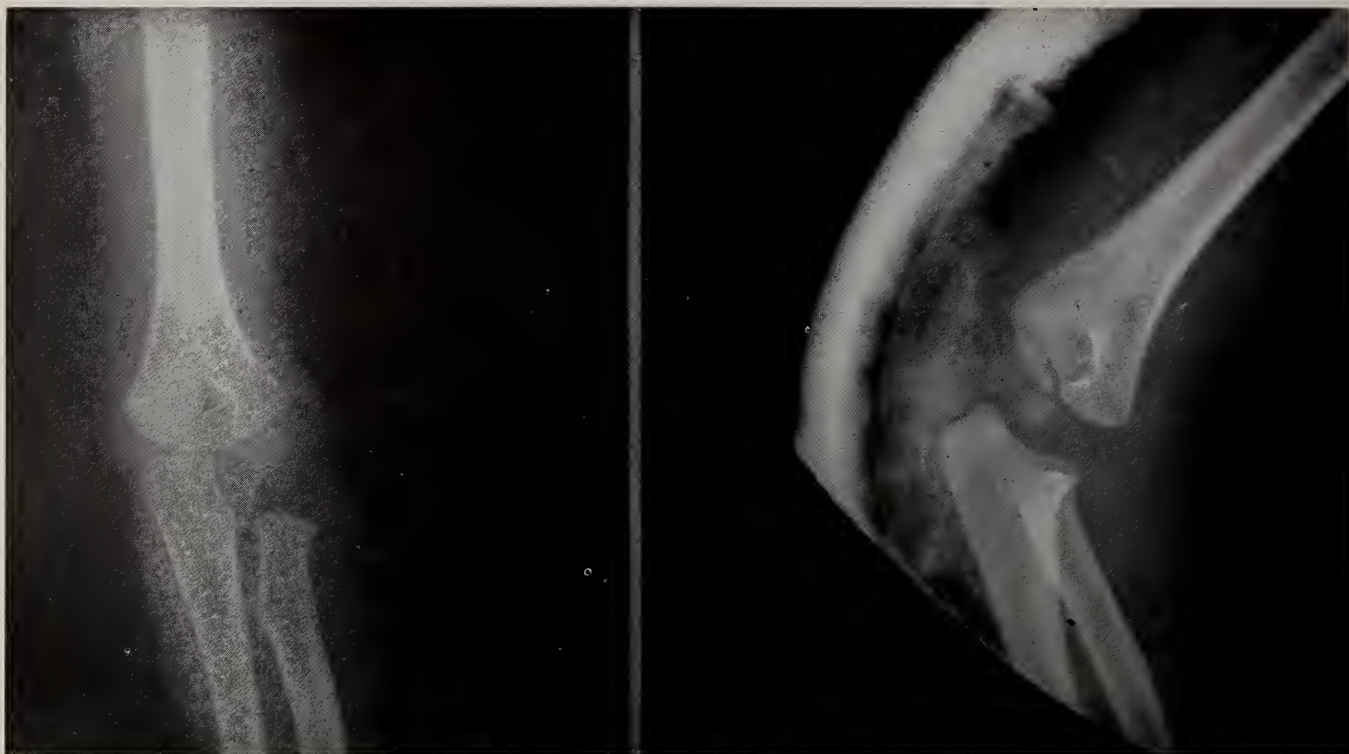


FIG. 4: One year old child with undisplaced capitella fracture including the lateral condyle which did very well with a posterior molded splint.

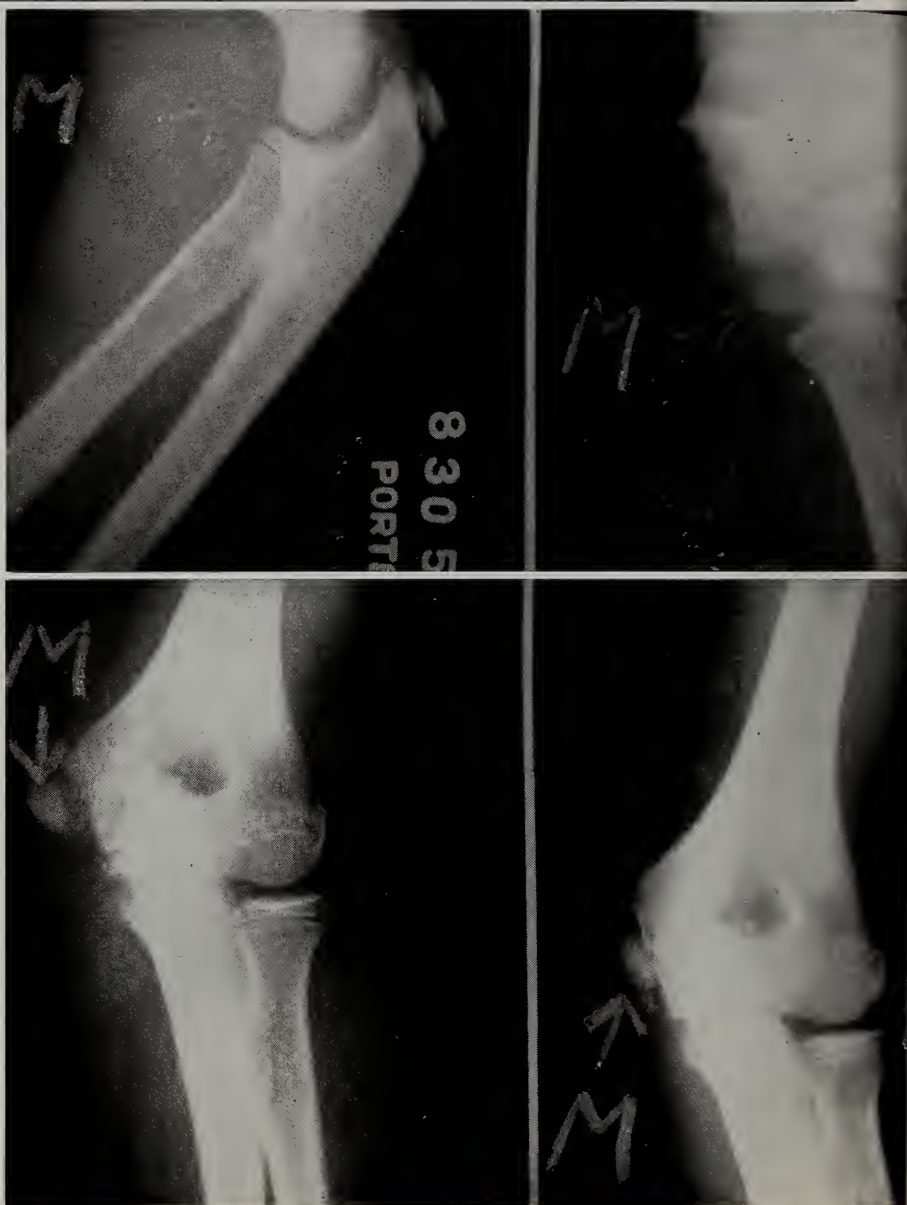
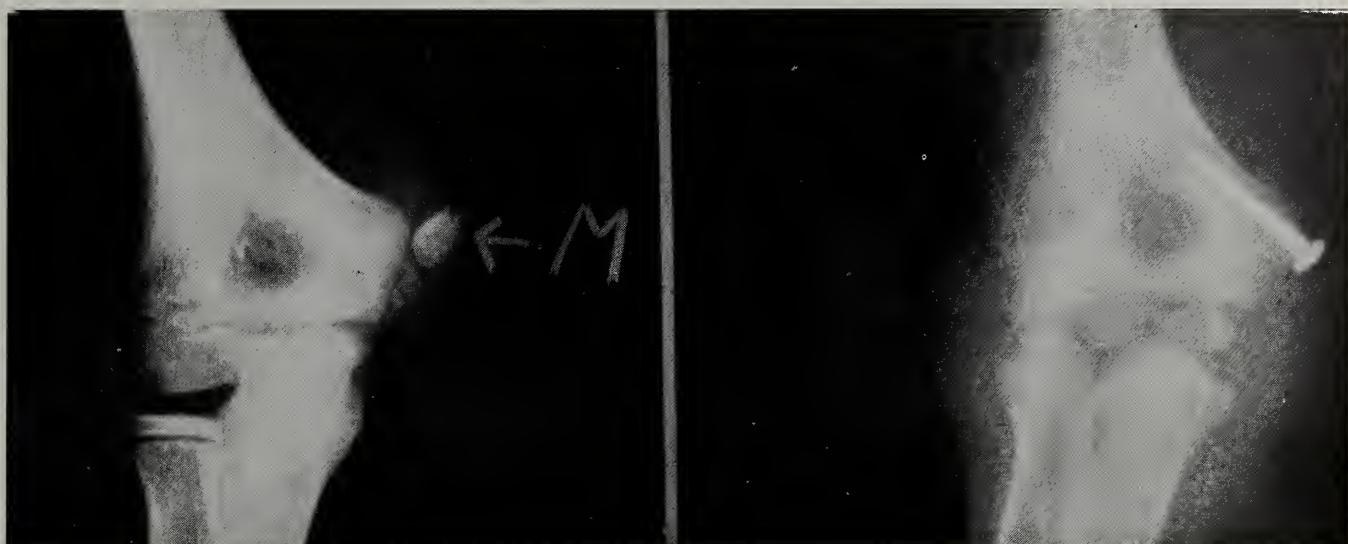


FIG. 5: Fracture of the medial epicondyle (M) displaced into the joint reduced by closed reduction.

- A. (Upper left) Lateral view, pre-reduction
- B. (Upper right) AP view, pre-reduction
- C. (Lower left) Post reduction, immediate
- D. (Lower right) Post reduction 10 weeks, full painless motion



A. Pre-operative

B. Ten months following open reduction

FIG. 6: Ten year old boy with fracture of medial epicondyle with 180 degrees rotation and ulnar nerve impingement.

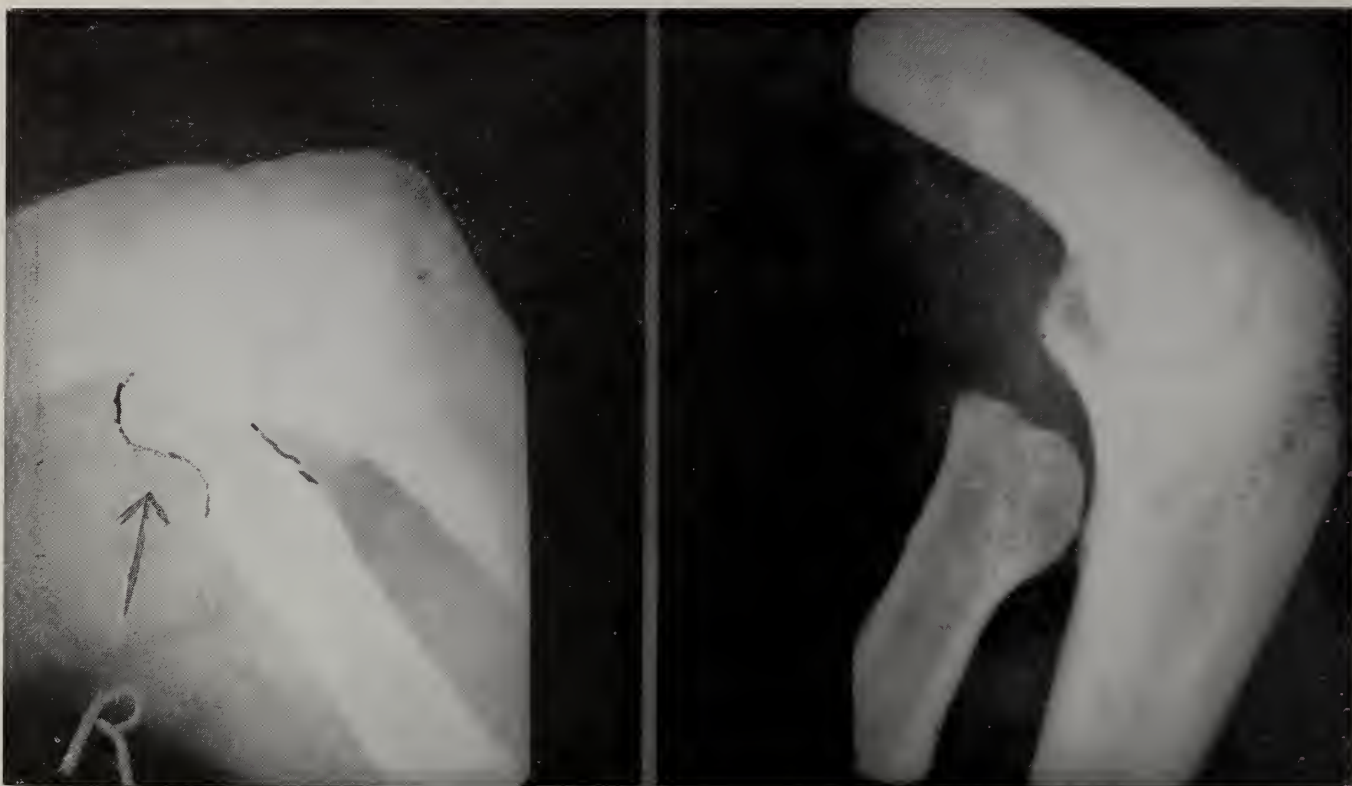


FIG. 7: Monteggia fracture. A fracture of the ulna with dislocation of the radial head (R) posteriorly.

A. AP view

B. Lateral view

C. & D. Two months following open reduction and fixation of the ulna with a Rush nail. (Note the reduction of the radial head.)



A. Radial head (R) is dislocated anteriorly.

B. Two months following removal of radial head.

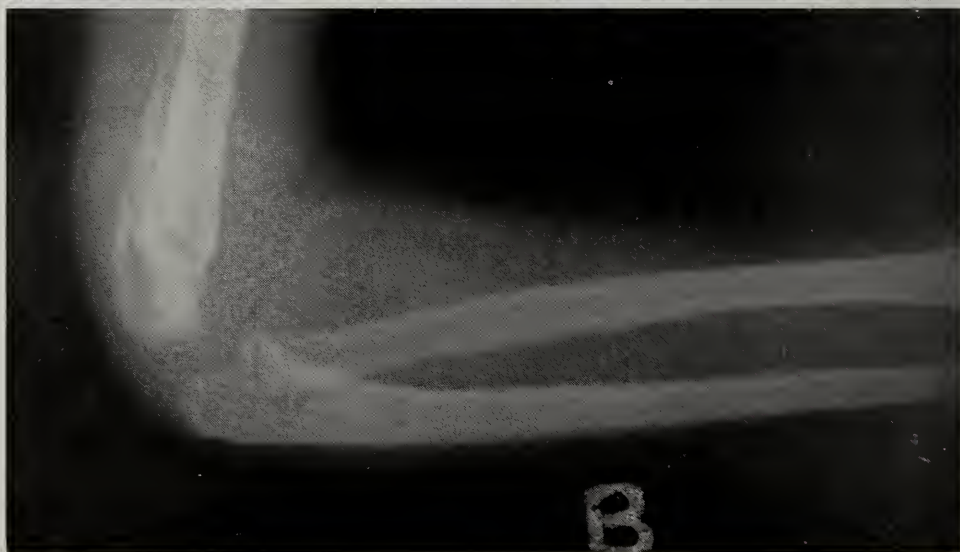
FIG. 8: An old unreduced Monteggia fracture.



FIG. 9: Six year old child with a supracondylar fracture. The final x-rays were excellent. See Fig. 10 for the clinical result.

A. Pre-reduction

B. Eight weeks post reduction



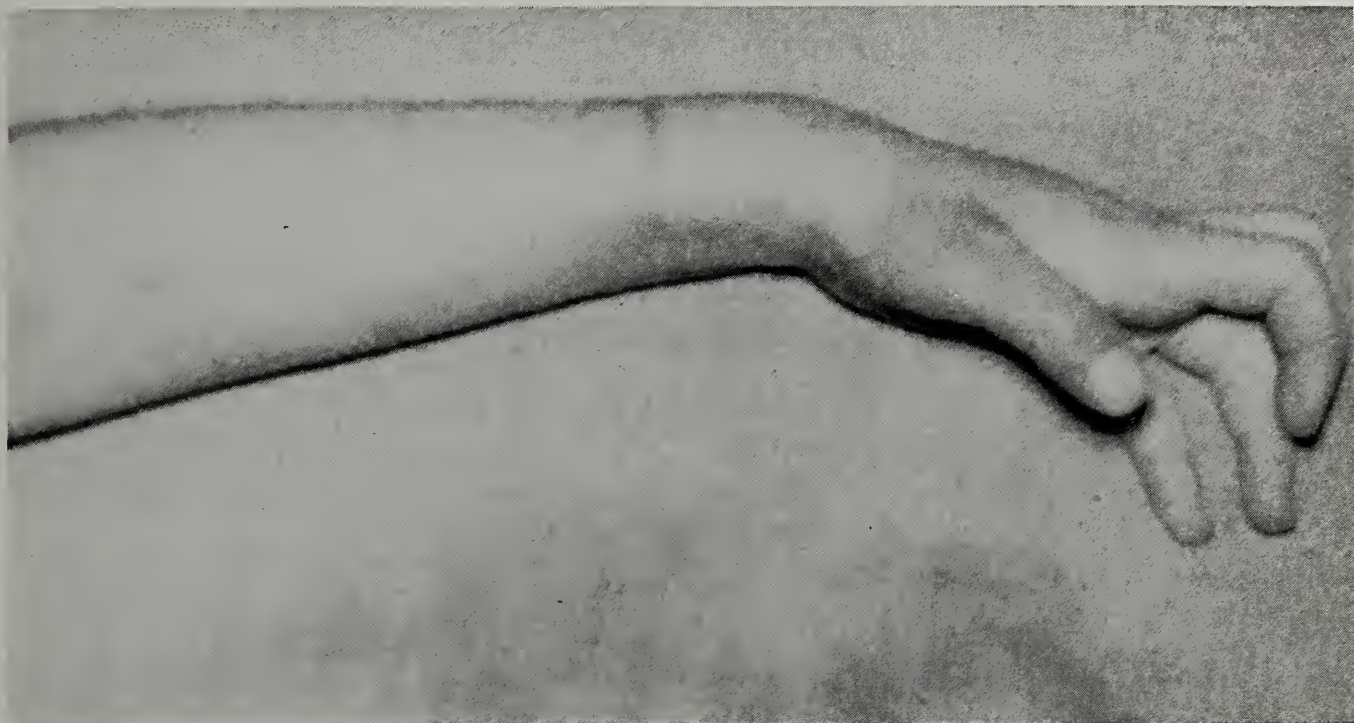


FIG. 10: Incomplete Volkmann's contracture. Same case as Fig. 9.

from these fractures, can be extremely grave. This has been brought home to us very clearly recently with two supracondylar fractures with severe complications. For some reason or other these all seem to happen over the week-end and oftentimes by Monday morning the damage is done.

One child, age 6, Figure 9. came in on a Saturday afternoon. The fracture was reduced satisfactorily and held in about 45 degrees of flexion and a posterior molded splint. The next day circulation was adequate as it was the first day, but x-rays were taken and I would assume from studying the x-rays that the position was lost by the technician trying to get an adequate AP & lateral film of the elbow. The following day, that is Monday morning, about 48 hours after the injury, the fingers were anesthetic, the fracture completely off and there was little motion of the fingers. The child was put to sleep, the elbow taken out of 45 degrees flexion, put up in Dunlop's traction and during the examination under anesthesia, a radial pulse could be palpated. This child developed little motion of the fingers, and although it was extremely difficult to evaluate her with a pin, it was felt that she had a stocking type of anesthesia to the mid-forearm. She continued to have a good radial pulse and for this reason her antecubital space was not opened. At the present time, about eight weeks after her injury, she is improving her sensation and motor power in the flexors and extensors, but I believe she is going to end up with an incomplete Volkmann's paralysis. Figure 10. is a photograph of her hand.

The second case was a severe supracondylar fracture with a complete radial nerve paralysis appearing prior to reduction of the fracture. The wrist was held with a cock-up splint following the reduction. The sensation returned after about three months and the motor power about one month later.

I would like to emphasize several points concerning the supracondylar fracture.

1. The hand should be immediately evaluated regarding Pain, Palor and Pulse.
2. If the radial pulse is absent or does not return following reduction, skin traction (Dunlop's) or skeletal (pin through the olecranon) should be immediately applied.
3. Hyaluronidase (Wydase® or Alidase®) should be injected into the soft tissues of the elbow. Possibly Parenzyme® (Lyophilized Trypsin) intramuscularly may be of help in reducing the edema.
4. If the signs of Volkmann's Contracture persist after a few hours, the elbow should be opened through the antecubital space and the brachial artery explored.

SUMMARY

Fractures of the elbow in children have been reviewed with emphasis on several types requiring an open reduction.

Dextro-Chlorpheniramine (Polaramine[®]) In Allergy: Preliminary Report Of 75 Patients And Comparison With Racemic Chlorpheniramine (Chlor-Trimeton[®]) In 39 Patients

MARTYN VICKERS, M.D.

Chlorpheniramine (Chlor-Trimeton)[®] is used widely to control respiratory and dermatologic allergies and to prevent foreign-protein reactions to certain therapeutic agents. Labelle and Tislow,¹ who tested and compared this and other antihistaminic drugs for potency and toxicity, reported that Chlor-Trimeton had the highest therapeutic index in this class.

Chlorpheniramine is among those compounds which possess an asymmetric carbon molecule and therefore potential optical activity. Racemic chlorpheniramine was recently separated into its dextrorotatory and levorotatory isomers,² each of which was compared with the parent compound for potency and toxicity.

In vitro and *in vivo* studies³ in laboratory animals showed that the dextrorotatory form (Polaramine) was twice as potent as the racemic form and 100 times more potent than levo-chlorpheniramine. There was no significant difference in the pharmacodynamics or central nervous effects. Acute and oral subacute toxicity studies showed that, on a weight-for-weight basis, the toxicity of dextro-chlorpheniramine was the same as that of the racemic form but less than that of the levorotatory form. No pathological changes attributable to either dextro-chlorpheniramine or racemic chlorpheniramine in therapeutic dosage could be elicited in laboratory animals. It was therefore concluded that the therapeutic activity of chlorpheniramine resides primarily in its dextrorotatory stereoisomer, which is twice as potent, but no more toxic, than racemic chlorpheniramine.

Early clinical trial⁴ confirmed the therapeutic implications of this discovery. Polaramine, in divided doses rarely exceeding 12 mg. daily, provided significant, rapid, sustained relief of dermatologic and respiratory allergies in nearly all of the 100 patients to whom it was administered.

METHOD

Our series consisted of 75 patients, ranging in age from two to 70 years, of whom 12 children and 36 adults were victims of hay fever or other nasal allergies, six children and 10 adults had asthma, one child and five adults had dermatologic allergies, and five children had coughing, bronchitis, dyspnea, or otitis of allergic origin.

Of this group, 39 patients had been treated previously

with Chlor-Trimeton and therefore we were able to compare the effectiveness of Polaramine with the older drug in these patients.

Polaramine is available in Repetabs[®] (repeat action tablets) containing 6 mg. or as 2 mg. tablets and both dosage forms were used in this study.* We administered the Repetabs to 49 patients; the usual dosage was two daily although severely afflicted patients received three daily and children received only one at bedtime. The 2 mg. tablets were administered to 26 patients in divided doses ranging from 2 mg. to 12 mg. daily and averaging 8 mg. daily. We used the Repetabs whenever possible because of their greater convenience and sustained duration of action.

Results were graded as "very good" if there was complete relief of symptoms and "good" if marked relief occurred. Slight or questionable improvement was graded as "fair" and no effect, or an untoward effect, was considered "poor."

RESULTS

The effects of Polaramine among our patients are summarized in Table I. The drug provided total or substantial relief of symptoms in 56 (74 per cent) of 75 patients treated; its effects were rapid and, particularly with the Repetab form, of long duration.

In hay fever and nasal allergies Polaramine usually diminished nasal congestion and irritation, and sneezing was less severe. Its effect on asthma was frequently very marked: some patients were entirely free from attacks during the period of therapy and in others the frequency and severity of attacks diminished. Of the four patients with asthma who responded poorly, one is severely afflicted, requiring steroid therapy, and another is constantly and unavoidably exposed to household pets. Relief of pruritus was reported by several patients with dermatologic allergies. One patient noted that the tablet before bedtime helped him to sleep although he did not complain of daytime sedation.

The comparison, in 39 patients, of Chlor-Trimeton

*A supply of Polaramine for this study was provided by George Babcock, Jr., M.D., Division of Clinical Research, Schering Corporation, Bloomfield, New Jersey.

TABLE I

RESULTS WITH POLARAMINE					
<i>Indication</i>	<i>Number of Patients</i>	<i>Very Good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>
Hay fever and other nasal allergies	48	26	11	6	5
Asthma	16	8	2	2	4
Dermatologic allergies	6	4	1	—	1
Miscellaneous indications	5	2	2	—	1
Summary	75	40 (53 %)	16 (21 %)	8 (11 %)	11 (15 %)

TABLE II

COMPARATIVE EFFECTIVENESS OF EQUIPOTENT DOSES OF
POLARAMINE AND CHLOR-TRIMETON

<i>Indication</i>	<i>Number of Patients</i>	<i>Polaramine Superior</i>	<i>Equal</i>	<i>Chlor-Trimeton Superior</i>
Hay fever and other nasal allergies	26	11	10	5
Asthma	9	4	1	4
Dermatologic allergies	2	—	1	1
Miscellaneous indications	2	1	—	1
Summary	39	16 (41 %)	12 (31 %)	11 (28 %)

and Polaramine in equipotent dosage (Polaramine at half the milligram dosage of Chlor-Trimeton) is summarized in Table 2. In the greatest number of patients, Polaramine was superior, rather than equal or inferior, to Chlor-Trimeton although the clinical effects of dextro and racemic chlorpheniramine were not significantly different. At equipotent dosage, the major advantage of Polaramine over Chlor-Trimeton is the reduction in side effects which occurs because milligram dosage can be halved.

Polaramine caused little or no drowsiness among our patients. Xerostomia and excessive thirst was reported by one patient, another experienced nervousness and slight elevation of blood pressure, and a third, who had a cold during the treatment period, became slightly drowsy. These patients were adults with nasal allergies who had received the 6 mg. Repetab twice daily. An unusual reaction occurred in a child nine years old, who had received two Polaramine Repetabs daily for eczema. He became extremely lethargic and pallid, and developed anorexia and alternating chills and fever. Medication was discontinued immediately and the child was well after 2 days.

DISCUSSION

This incidence of side effects is low compared with that encountered following administration of other antihistamines. Goodman and Gilman⁵ state that about

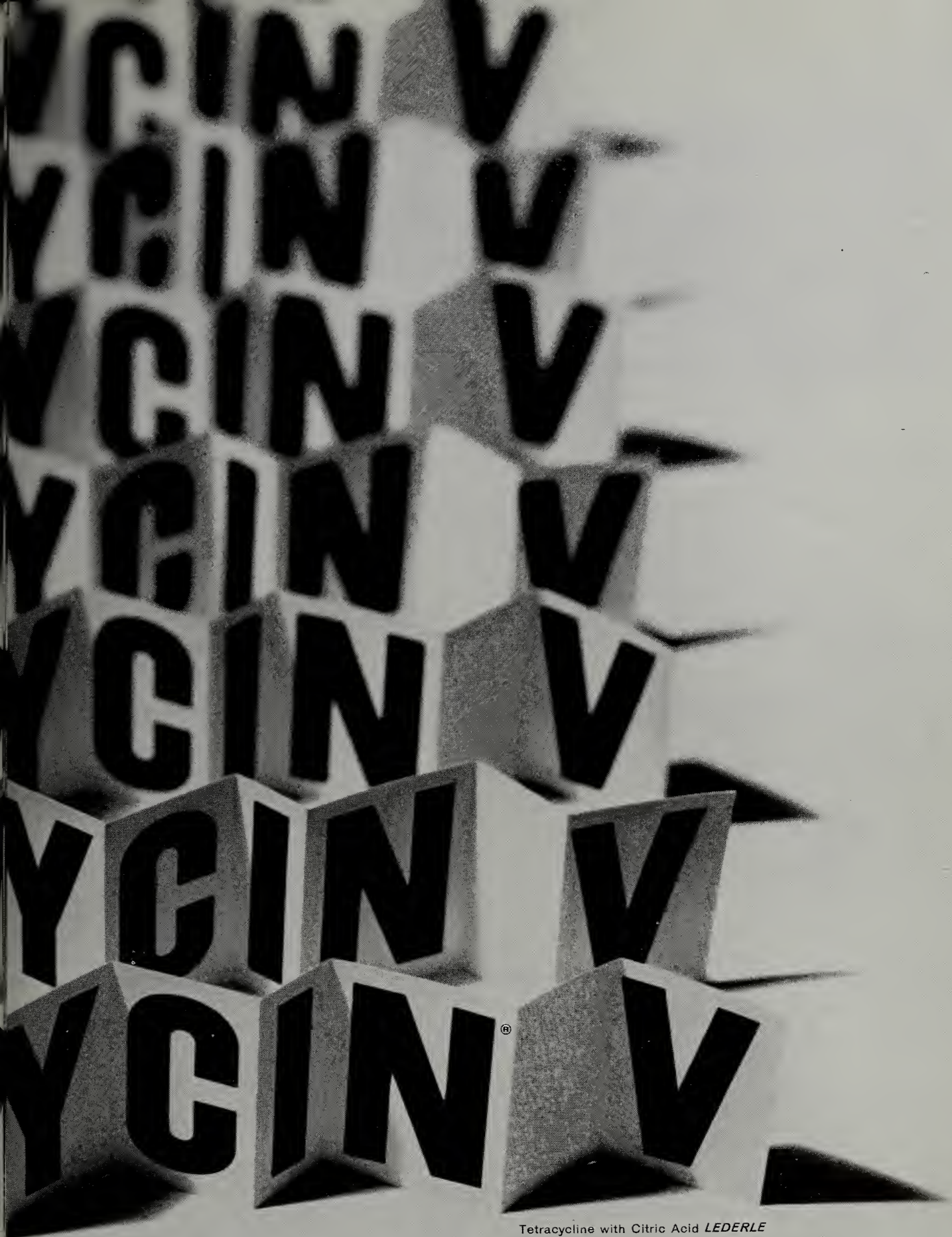
20 per cent of patients receiving therapeutic doses of an antihistamine experience some untoward effect. Drowsiness is most common although occasionally the opposite effect occurs and symptoms such as euphoria, nervousness, insomnia, and tremors are manifestations of central nervous stimulation. The patient in our series who was made nervous by Polaramine experienced the same reaction with Chlor-Trimeton; undoubtedly, he would react in this manner to any form of antihistaminic therapy. Of the 100 patients previously reported,⁴ one experienced a stimulating effect, two became drowsy, and one noted xerostomia.

The marked effectiveness of Polaramine in low dosage, and the consequent reduction in antihistaminic side effects, makes this drug especially useful. The relatively high doses of Polaramine which might be necessary in patients with severe or resistant allergies can be administered with safety and may thus obviate the need for steroid therapy. For example, most patients tolerate 18 mg. Polaramine well although the equipotent dose of Chlor-Trimeton, 36 mg., is rather high for prescription among ambulatory patients because of the likelihood of drowsiness or other untoward reactions.

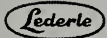
SUMMARY

Polaramine, the dextrorotatory stereoisomer of chlorpheniramine, was administered to 24 children and 51





Tetracycline with Citric Acid **LEDERLE**

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York 

adults with nasal allergies, asthma, or dermatologic allergies. The usual dosage was a 6 mg. Repetab twice daily although higher or lower doses were used when indicated.

Satisfactory relief of symptoms occurred in 56 patients (74 per cent) and side effects occurred in only four patients (five per cent). Drowsiness was much less common than with equipotent doses of other antihistaminic agents. At half the usual milligram dosage of Chlor-Trimeton, Polaramine was equal or superior to the racemic compound in 28 (72 per cent) of the 39 patients who had been treated with both drugs.

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268 State Street, Bangor, Maine.

THE SETTING UP OF A CARDIAC CLINIC — *Continued from page 3*

8. Some progress was made in initiating an epidemiological study on a number of men with previous myocardial infarctions who had broken loose from Medical Control and returned to heavy labor.	Hypertension	66
	Diabetics	7
	Abnormal E.K.G.'s	111
	Lung tumors	7
9. <i>Basis Statistics</i>	f. Number of employees referred back to family doctor after screening examinations	191
a. Number of Clinics held at Plant	11	
b. Number of employees screened at Plant (This includes those sent in by family doctor)	1569	
c. Number of employees evaluated at Clinic	88	
d. Total number of examinations by Clinic	100	
e. Number of employees diagnosed to have cardiac or associated disease:	g. Results of Cardiologists examinations:	
	Number released to regular jobs	70
	Number released to light work only	18
	Number found free of Heart Disease	22
	(These included above under those released to regular jobs.)	

THE USE OF PROCHLORPERAZINE IN SURGERY — *Continued from page 8*

utes after prochlorperazine was administered and usually disappeared completely after the third dose.

We did not see any side effects attributable to the use of prochlorperazine and no evidence of depression of circulation, respiration, cough reflex, or peristalsis.

Urine and blood studies were all within normal limits.

ACKNOWLEDGMENTS

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30 The Fenway, Boston 15, Massachusetts

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Across The Desk

Report Of AMA Interim Session, December, 1958

Some drastic changes have been made in the portrait that represents us. On December 2-5, 1958, in the city of Minneapolis, the Interim Session of the AMA was held. The House of Delegates of the AMA met at the Hotel Leamington, and herewith follows a very brief report of some of their actions.

AMA Reorganizes

If one word could characterize all the actions, the word would be "change," for AMA seems to be undergoing at long last a change in its philosophies. The whole structure and organization of AMA has been reorganized, and some of its component parts, for example, the Washington office, are in the midst of a drastic overhaul. This has been brewing since last spring as a result of AMA's steadily declining effectiveness on Capitol Hill. Henceforth, the duties of the AMA Washington office are restricted, and unless present plans change, expert lobbyists will handle the chores on Capitol Hill while doctors are being entrusted with the responsibility of indirect lobbying with their own patients being their "third party."

"Throughout the country, doctors are treating an average of 2 million patients every day in the year," said Dr. F. J. L. Blasingame, Executive Vice-President of AMA. "We're going to concentrate on lobbying on these grass roots."

New Look At "Free Choice"

The AMA House of Delegates took a step that would

have seemed fantastic just a short time ago. It called on state affiliates — that's us — to reappraise the matter of "free choice of physician" — to ask themselves if this concept is to be considered fundamental principle, incontrovertible, unalterable and essential to good medical care without qualification.

This poses for open discussion the question: "Whether attitudes toward the free choice of physician and the closed panel system may be undergoing evolutionary change."

Medical Care For The Aged

In relation to this problem, you want to remember that Maine has 10.2 per cent of its total population in the over 65-age group, which means that Maine now is where the rest of the nation will be in about 1975 as far as aging population goes. The population estimates for the nation show a 46 per cent increase by 1975 of those persons over age 65 — for those persons over age 75, a 61 per cent increase. These figures are predicated on the assumption that no new medical discovery will alter the present mortality rate.

AMA President, Gunnar Gunderson, as well as Minnesota Governor Orville L. Freeman, emphasized the mounting need of providing health services to greater numbers of citizens over age 65. President Gunnar Gunderson left no doubt that such hope that remains to prevent enactment of the Forand Bill in the new Congress is dependent on medicine taking bold steps to solve the problem through voluntary health insurance instead of federal compulsion. Governor Freeman did

not conceal his admiration for the Forand Bill's objectives.

The House of Delegate's final action was to urge doctors "to accept a level of compensation for services to the plus 65-ers that would lead to health insurance coverage at reduced premium rates." Only last minute efforts by the Ohio delegation prevented the adoption of a clause specifying that stipulated fees would be accepted by doctors as payment in full. To phrase it all another way, AMA went on record in favor of physicians paring down their fees, if necessary, to permit coverage of the senior citizens in a low-premium health insurance plan.

In Maine, studies by Eugene E. O'Donnell, M.D. of Portland and George J. Robertson, M.D. of Waterville on the subject of medical care for the aging are producing valuable statistical material available nowhere else.

Divided On Osteopathy

An Indiana delegate introduced a resolution for local option permitting state medical societies to work out such arrangements with the osteopathic profession as they saw fit. The subject was spiritedly debated in reference committee. Discussants from Louisiana and Arkansas were most emphatic in opposing the resolution. Support for it came from New York, Ohio and Massachusetts speakers. California, with 1/6 of the nation's D.O.'s, was split. Dr. John M. Kline, San Francisco, past president of the AMA, urged approval; Dr. Donald Cass, Los Angeles, predicted the dissolution of the school of osteopathy in his city and called for no action on this question, "until the osteopaths come to us."

The result — a compromise: The local option was disapproved, but AMA's judicial council was asked to review the legal aspects, possible working arrangements with osteopathy and to make a report to the AMA House of Delegates in June.

Other Actions

All constituent state societies were urged by the House of Delegates to cut red tape and extend service membership to the Armed Forces, Public Health and Veterans Administration physicians. The Maine Medical Association has for some time extended service memberships to Armed Forces and Public Health Service, but as yet, we have not included the Veterans Administration in our service membership category.

Observance of an international medical year was urged. Senator Humphrey (D., Minn.) will seek enabling legislation in 1959.

Dr. Lonnie A. Coffin of Farmington, Iowa was named the 1958 General Practitioner of the Year.

AMA urged expansion of facilities for medical education, an increase in the enrollment in present medical schools and new medical schools, as well as new schools of two-year basic science and medicine.

They went on to state that "the American Medical

Association neither approves nor disapproves of the inclusion of voluntary health organizations in the United Fund drives."

It regretted the restrictive changes in the Medicare Program and recommended that the Social Security Act be amended by Congress to permit states to combine the present four public assistance medical programs into a single medical program administered by a single agency making available uniformity of services to all eligible public assistance recipients.

Authorized the Council of Medical Service to sponsor at the earliest practical date a congress on prepaid health insurance.

Approved a plan to develop a "Buyer's Guide" which will be sent to physicians to help their patients to analyze the merits of available health insurance programs.

Approved a bylaw amendment which will allow dues exemptions for interns and residents serving in training programs approved by the Council on Medical Education hospitals.

Encouraged voluntary registration of all the paramedical personnel who assist physicians but opposed the extension of governmental licensure and governmental registration at this time.

Agreed with the Committee on Medical Practices that "relative value studies" should be conducted by each constituent medical association but not on a national or regional basis by A.M.A.

Urged each constituent society to establish a committee on rehabilitation to carry out activities recommended by the Board of Trustees.

Called for continued activity at all levels to stimulate the development of effective poliomyelitis inoculation programs.

At the opening session, six state medical societies contributed a total of almost \$250,000 to the American Medical Education Foundation. The gifts were California, \$150,000; Indiana, \$35,000; New Jersey, \$25,000; New York, \$19,000; Utah, \$9,000; Arizona, \$8,000. In addition, the American Medical Association announced a contribution of \$100,000 to the AMEF.

So much for the actions of the AMA, but still under the heading of things that have happened comes this next item.

Being interested in the health of others is a doctor's work, but today everyone is interested in health. In your own state legislature last session, there were 36 bills pertaining to health. Some very real benefits accrue to the politician who is interested in the health of his constituents. In the federal Congress, no less than 86 per cent of the United States Senators had their names on health bills in the last session. Senator Smith was in on 8; Senator Payne on 8, Congressman Coffin on 1 and Congressman Hale on 1. In the federal government, the HEW budget was increased by 47 per cent — this was more than they asked for — more than they needed — they couldn't spend it. Even

in our own little state, in the last session of the legislature was a bill to enable the State Department of Health to return 13,000 unused dollars to the general fund (this money had been lying around since the 1951 appropriation).

Socio-Economic Problems

AMA publications will be used for "free and open discussion of socio-economic problems applicable to medicine." This is a real change in AMA attitude. Less than a year ago, when we sent out our questionnaire on social security coverage for M.D.'s, we received a blast from AMA's socio-economic office and a letter of attack for printing in our Journal both sides of the social security question.

Social Security

To the best of our knowledge, polls taken by mail throughout the country by some of the state medical societies indicate that Maine, Massachusetts, Connecticut, New York, Pennsylvania, Washington D. C. and Ohio medical societies have all voted for inclusion in the social security system. The Washington Report on the Medical Sciences for December 8 predicts that within 18 months, AMA will ask for inclusion or "at least will stand still for the branding iron."

Federal Health Spending

The federal government's medical activities are now on a massive scale, and they continue to grow. This year for all health programs — research, medical care, public health — Uncle Sam is spending about 62.6 per cent more than he did five years ago — and 13.5 per cent more than last year.

Programs for 22 separate departments and agencies of the government range from cancer research to federal employee clinics. The total cost is \$2.8 billion. 1959's estimate is \$344.7 million more than last year. Right now the agencies of the Bureau of the Budget are working on requests to be presented to Congress in January. There is little question that the bills when finally enacted next year will set another new high for federal medical spending.

What's Ahead In Federal Legislation?

As you know, the Jenkins-Keogh Bill was not passed by the last session of the legislature. It will be re-introduced in the new legislature when it convenes January 7, and its chances of passage this year are estimated as "only fair."

The outcome of the Congressional elections indicates a swifter, less inhibited attack on medico-economic issues than previously appeared to be a prospect. "The trend for more government activity in the field of

medicine is inevitable regardless of the voting results, but the pace has been accelerated substantially by the prestige won by organized labor in the last elections."

Already AFL-CIO has reaffirmed its intention of pressing the new Congress for passage of "free" hospitalization and surgical care for social security beneficiaries (the Forand Bill). This bill probably would be a starter rather than an ultimate objective.

Representative John D. Dingle (D. Mich.) of the Murray, Wagner, Dingle fame won reelection for a third term. His office said that he will reintroduce his compulsory national health insurance bill in January. He will also co-sponsor the Forand Bill.

The AFL-CIO has given high priority to the passage in the next Congress of the Forand Bill for hospitalization and surgical services for the OASI beneficiaries. It is now third in a ten-point legislative program. Ahead of it, according to President George Meany, are only aid to depressed areas and federal aid to education. On the Forand Bill, Mr. Meany states "It is still either impossible or too costly for our senior citizens to obtain such insurance through non-profit commercial channels."

Listening Conferences

Secretary Flemming of the Department of Health, Education and Welfare has set up a series of listening conferences arranged by various sections of his department in which all leaders of the nation's business, manufacturing, education, distribution and communications organizations come into Washington for a series of chats. The Public Health Service is increasing their studies and widening their scope to include everything that effects health from automobile exhausts to activities of the Food and Drug Administration.

Looming large in the Department of Health, Education and Welfare's sights is more emphasis on facilities and personnel for the care of the aged. "Health care of the aged was thoroughly aired during the course of Secretary Flemming's first conferences with heads of medical and health organizations on emergency health needs."

The following two items come from widely different areas but touch on the same subject:

Senator Morse's Hearings Certain To Hit Sensitive Nerves

One of the earliest trouble shooting targets in 1959 will be the hearings conducted by Senator Wayne Morse (D., Oreg.). While nominally, they will be resumption of hearings begun last August into group hospitalization premiums in the District of Columbia, data are being gathered on a national scale ostensibly for the purpose of comparison. Note: Senator Morse is a high-ranking member of the Senate Labor and Public Welfare Committee which would have jurisdiction over any

investigation of the Blue Cross-Blue Shield or other insurance plans. The present sign — the Morse committee hearings will be started within 60 days after the convening of Congress.

Bugbee Counsels Doctors To Tidy Up Own House Lest The United States Government Intervene

If physicians do not crack down on those among them who are playing medical care insurance for a good thing, the government will take a disciplinary hand. American medicine received that warning in Washington this week from George Bugbee, President of Health Foundation. To put it less bluntly but just as unequivocally, the admonition came from the head of a firmly established service organization which, supported as it is by all the country's leading drug and pharmaceutical houses, is a decided partisan to organized medicine and its members.

The rise of prepaid hospital and health insurance has been accompanied by a certain amount of fee loading and overusage of services and facilities, according to Bugbee, who addressed the annual luncheon of the Washington, D. C. Medical Society. Doctors and hospitals must "demonstrate to the public that the problem of overuse and excessive costs can be controlled if the growth of insurance is not to be retarded," said Bugbee.

"I believe that the time has come for these groups to coordinate and work out necessary administration structure to demonstrate to the public that the small percentage of their ranks who create these problems can be controlled." "Without such demonstration, I am sure the pressure for government intervention and financing and control of physicians and others in the health field will increase, and we have already seen much government interest in some of these areas. If criticism on these points becomes much greater, I believe that government action is inevitable."

Legislative First Aid Station Is Established

A legislative first aid station in the capitol building, financed and equipped by the Louisiana State Medical Society and manned by members of the East Baton Rouge Parish Medical Society was in operation during the recent special session. The station was maintained for the convenience of the legislators and will be kept open whenever the legislature is in session.

Price Index Holds Firm — Medical Costs Rise

Consumer price index in United States cities remained the same in October for the second consecutive month, but there is no leveling off of the medical care category. It increased again from 146.7 an 040.4 per cent increase over the previous month and is 5 per cent greater than the October index for 1957. Group hospitalization

insurance programs advanced in some cities and fees for professional services were higher, said the Bureau of Labor Statistics in explanation. Prices for prescriptions also increased slightly.

An Important Sign Post

Since 1937 the doctors have battled government interference with the large vague area called private enterprise. We have attempted to stop government intervention in private business, especially in the field of health. Our latest effort on this score was the Forand Bill.

In all of our efforts in this direction, we had powerful allies — "big business," hospital associations, national Chamber of Commerce, NAM, etc. Now we must recognize that these allies are no longer wholeheartedly with us, because the economies of this nation are so changed that our former allies now stand to benefit substantially from increases in government control.

If the Forand Bill is passed, "free" hospital and surgical and medical care will be underwritten by the federal government. Hospital deficits will thaw and may even melt away.

If social security is expanded to increase pensions and provide hospital, surgical and medical care for the over age 65 group (the government now provides medical care for 38 million people), think of the savings this will mean to the big corporations if the government is going to take over most of their "fringe benefits."

"If you think tomorrow is time enough to get at this problem, read with me a report of the General Motors Union Contract effective January 1, 1959." "While looking ahead to possible inclusion of hospital and medical benefits under Social Security, General Motors has a provision excluding present or former employees (including retirees) who become eligible for such federal benefits, except that if the level of benefits under such a plan is lower than under its program it may, at its option, provide a plan supplementing the federal benefits to the extent of the difference between them."

1958 Worst Measles Year Since 1941; Other Data

Random notes from current morbidity report by Public Health Service: With something like 750,000 cases reported, 1958 was the worst measles year since 1941 (890,000) . . . there were fewer than 1,000 cases of diphtheria all year, first time since records have been kept that the national total stayed within three figures . . . hepatitis, with just a little more than 15,000 cases, ran slightly ahead of 1957 and it was first interruption of steady decline noted since 1954's peak caseload of 50,000.

PHS National Office of Vital Statistics estimates 4,248,000 babies were born in 1958, a decline of 53,000

(1 per cent) from the record high of 1957. Fewer marriages in that year resulted in drop in 1958 births and birth rate (from 25.3 to 24.5), says NOVS.

In 1958 the birth rate per 1,000 females of child-bearing age (15-44) was 119.9. This compares with 122.5 in 1957 and 120.8 in 1956. An estimated 1,151,000 first-born children were delivered in 1958, compared with 1,164,000 in the previous year.

Institute Cites Growth of '58 Health Insurance

Prepaid Health coverage of all types maintained a good rate of growth in 1958, according to Health Insurance Institute, New York. Total health care benefits estimated at \$4.8 billion were paid out, compared with \$4.2 billion in 1957. At year's close, some 121 million persons held greater or less protection against doctor and hospital bills through company policies, membership in the Blues, affiliation with industrial health care plans and other types of coverage.

Doctor Draft Extension

The draft act, with its amendment for calling up physicians under age 35, is scheduled to expire next June 30. Congress will likely be asked by the Defense Department to extend the regular draft and the physician amendment. The Defense Department expects it will have to use the doctor draft, which hasn't been invoked in two years, to produce the physicians it will need next year.

An Instrument Of Foreign Policy

Dr. Emmanuel Voulgaropoulos, of Lowell, Mass., and his two medical technicians are getting final briefings in Washington preparatory to early departure for Cambodia where they will establish a hospital under Medico auspices.

Tax Ruling May Benefit Indemnity-Type Coverage

A recent decision of the Internal Revenue Service reaffirms policy of granting deductibility, as a medical expense, of sums paid in premiums for health and accident coverage. This allowance is granted even though, under the insurance policy, the indemnity payments may exceed amounts actually spent by the insured for medical or hospital care. Further, benefit payments received under a policy of this kind are excludable from gross income (Rev. Rul. 58-602).

Social Security Program Held Financially Sound

A 13-member advisory council last week filed a unanimous report holding methods of financing the federal social security program to be sound and without need of fundamental change. Organized medicine's opposition to inclusion of physicians and widening of benefits to covered persons has been based in part on counsel from certain sources that the social security structure is financially irresponsible.

Correction: *Across The Desk*, November, 1958 issue of the Journal of the Maine Medical Association, page 427, should state that full accreditation of the Augusta State Hospital was granted by The Joint Commission on Accreditation of Hospitals.



DEAN H. FISHER, M.D.
COMMISSIONER

State of Maine

Department of Health and Welfare

Maine Faces Serious Dental Manpower Needs

A. H. GARCELON, D.D.S.*

Maine members of the New England Advisory Commission on Dental Education have unanimously agreed to endorse the joint recommendations of the Commission and the New England Board of Higher Education relative to the urgent dental manpower needs now existing in this and other New England states. State Representative Lucia M. Cormier of Rumford, is a member of both the Commission and the Board, the cooperative efforts of which have produced a comprehensive report on "Dental Manpower Needs in New England." Other Maine members of the New England Commission on Dental Education are: Dr. Henry H. Grant of Portland, representing the Maine Dental Society, and the writer. With Miss Cormier on the New England Board of Higher Education, as representatives from Maine, are: Dr. Lloyd H. Elliott, President of the University of Maine and Dr. Warren G. Hill, State Commissioner of Education.

Working with similar state groups made up of professional and lay members, the two organizations are concerned with the dental health of the people of the six-state area and see as the first step toward solving the problem of manpower needs the necessity of providing adequate educational opportunities for qualified New England students to prepare themselves for the profession of dentistry. The New England group has had the active cooperation of the Division of Dental Resources of the United States Public Health Service. The project of evaluation and summarizing the problem in terms of patients' needs and available dental manpower has had the support of the Surgeon-General of the United States, Dr. Leroy E. Burney.

SUPPLY OF DENTISTS DECLINES

Although New England was once among the regions most generously supplied with dentists, the area has seen its relative supply decline steadily since the 1920's. His-

torically, a majority of the nation's dentists were practicing in New England cities a century ago, and the six states had more than their proportionate share of the nearly 3,000 dentists then in practice. This highly favorable situation continued for many years as nearby Massachusetts became the site of two of the earliest dental schools, namely, Harvard Dental School, founded in 1857 — the first to be established within a university setting — and Boston Dental College, founded a year later, which was to become a part of Tufts in 1899. Graduates from these two famous schools joined the number of dentists produced under the one-time apprenticeship system to give New England its former enviable place as a center of excellent dental care.

But, early in the present century the trend began to change and Maine, New Hampshire, and Vermont, lost dentists during the 1920's, so that, by 1930, Connecticut and Massachusetts were the only New England states still to have persons-per-dentist ratios which were more favorable than the nation as a whole. The depression further reduced the number of dental graduates and during the 1930's not enough dentists completed school to replace those who had retired or died. This unfavorable trend has continued until today. Maine and Vermont actually have fewer dentists than they have had at any time since 1920 and the number of persons per dentist is now greater in those two states than it was at the turn of the century. Another factor which accounts for unusually heavy replacement needs in the profession is the fact that there is now a marked concentration of dentists in the older age group. This unquestionably tends to reduce the average productivity of the professional force. Older dentists, by choice, if not by necessity, generally work both fewer hours per week and fewer weeks per year, with the result that they see fewer patients than do younger practitioners. However, it is interesting to note a meaningful, though small increase in the over-all productivity of the profession, largely due to the growth of commercial dental laboratories; the increased use of auxiliary personnel in the dentists' offices and the introduction of new and im-

*Past President of the Maine Dental Society and Director of the Division of Dental Health, Department of Health and Welfare.

proved materials and equipment and the development of more efficient techniques and procedures. The technical innovations of the past two decades have produced impressive changes in all phases of dental practice. In terms of productivity, however, only operative dentistry has been significantly affected. Oral surgery, as well as orthodontic, prosthodontic and periodontic treatment procedures, probably call for almost as much chair time as they did 15 or 20 years ago.

HIGH CARIES INCIDENCE

Still other factors highly pertinent to Maine are brought out in the detailed report of the two dental health and educational groups. For example, this area has long been identified as one of high caries incidence, due to the absence of the natural preventative of drinking water with fluorides in optimal amounts for the years in which the teeth are formed. New England is probably the least generously endowed of any region in this respect as studies show that less than 0.1 per cent of the region's population reside in areas which are known to have natural fluorides or controlled fluoridation. Where the latter exists, it is so comparatively recent, that its benefits have been confined to the pre-school and primary school age population.

REPLACEMENT NEEDS HEAVY

Replacement needs in the New England area will be relatively heavy in the next few years, mainly because of the large number of dentists in the older age groups. Approximately one dentist out of every seven practicing in the region in 1955 must be replaced in each five year interval between 1955 and 1975. In all, an estimated 2,906 or 54% of the 5,450 dentists in practice in 1955 will no longer be active in 1975. For Maine, this is broken down to indicate that in 1955 there were 338 active dentists in the state; that in 1965 there will be 226 survivors from that year and in the following decade there will be 133 survivors, adding up to a replacement need of 112 from 1955 to 1965 and 205 in 1955-1975. Of the six New England states, Maine which must plan to replace 61% of its dentists by 1975, faces the most serious problem. This state ranked 30th in the United States for the number of persons per active dentist, in 1955.

Still another vital factor in any summary of treatment needs and future dental demand is brought out in the report — that of accrual of treatment needs. It points out that despite the near universality of treatment needs, probably no more than three persons in ten seek anything approaching systematic dental care at the present time. The report continues "A sample survey taken in 1953, for example, showed that only 34% of the population had seen the dentist in the previous year, including those whose visits were for emergency treatment only. It is this failure to treat new needs at the rate at which they arise which lies at the heart of the nation's dental problem. For, given the

additive character which typifies a large share of dental need, the neglect of dental defects results inevitably in an accrual of treatment needs and leads ultimately to high rates of tooth loss. The backlog of treatment needs which has now accumulated among the nation's population has reached staggering proportions, and new needs continue to arise much more rapidly than they can be cared for."

Frankly stating that to plan to meet the total health needs of the population is unrealistic, the report emphasizes that in health planning, as in most human endeavors, the ideal must wait upon the practical and adds, "The best we can hope to do at the present time is to assure that services in the future will be available to those who will use them. In other words, the crucial consideration in estimating future manpower requirements is the volume of care which people are likely to seek rather than the volume of care which they will actually need. The extent of need will determine the outside limit of potential demands for service, however, and it is pertinent to inquire whether any change in dental need can be foreseen at the present time which will affect demands for care in New England."

FLUORIDATION AS SOLUTION

"The one measure which offers real promise of reducing the incidence of dental need is fluoridation. Since New England has practically no naturally fluoridated water, it stands to gain even more from controlled fluoridation than do other regions. However, even if fluoridation were made immediately available throughout the region, the full impact on dental needs could not be felt for at least a generation . . . Since only a precipitous drop in dental need could effectively limit the growth potential of dental demand, for the purposes of this report, it is being assumed that fluoridation can sufficiently change the character of dental need, but that it will probably not reduce the level of dental need sufficiently to affect the level of dental demand within the forecast period."

PLAN HYGIENISTS' SCHOOL FOR MAINE

The report stresses growing need to utilize the scarce skills of the dentist to capacity which has brought new awareness of the potential usefulness of dental hygienists as an auxiliary professional group. The hygienist who is trained to perform prophylaxes, apply topical fluorides and assist with certain other procedures, can relieve the dentist of duties which may account for as much as one-quarter of his time. In 1955, Maine had 36 active dental hygienists of 11 per 100 active dentists.

The need to take immediate steps to establish a dental hygiene school in Maine was seen as the most pressing need of this state at a recent meeting of the Maine state group. This was one of 13 recommendations of the NE Advisory Commission. All of the recommendations were endorsed at the meeting at which the Maine par-

Continued on Page 35



ANSWERING QUESTIONS



Health Care For Our Senior Citizens

Prepayment of medical care for the elderly has long been a matter of urgent and continuing concern to the medical profession and its Blue Shield Plans. Within the past year, however, this problem has been made something of a political issue through the introduction of such legislation as the Forand Bill, which, if adopted, might radically affect the future of the entire voluntary health care movement in America.

What are the facts concerning Blue Shield coverage of senior citizens? What has the medical profession accomplished, through Blue Shield, to meet this challenge?

The answers to these questions will be of immediate interest as a New Congress meets — a Congress in which social welfare programs are certain to be accorded a high priority.

Some of these answers, as reported recently to A.M.A.'s Council on Medical Service by the national association of Blue Shield Plans, are truly encouraging.

Thus, in 1951, among a total Blue Shield enrollment of 21 million persons, nearly a million, or a little less than 5 per cent were over 65 years of age. Six years later, in 1957, among the total of 40 million persons enrolled, 2½ million, or 6½ per cent, were over age 65. Thus, in these six years, the number of Blue Shield members over 65 increased 170 per cent, while total Blue Shield enrollment increased only about 85 per cent.

Attention was called also to the fact that of the total number of people past 65 who have medical-surgical insurance coverage, about two-thirds are covered by Blue Shield.

Of all the people in the U. S., it is estimated currently that about 15 million are over 65 years old, and are not cared for by an established institution or agency. This represents approximately 8 per cent of the total population. Thus Blue Shield's ratio of 6½ per cent over age 65 is reasonably related even now to the ratio of the total population in that group — and rapidly approaching parity with it.

Blue Shield has always sought to serve medicine's inescapable responsibility to the *whole* community. It was until recently almost an exclusively Blue Shield feature that any member on retirement, or on leaving an insured group, could retain his coverage by "conversion" to a "direct-pay" basis. Few Plans impose any age limits on initial group enrollment, and an increasing number of Plans are accepting non-group members regardless of age.

Blue Shield is aware of medicine's responsibility to our senior citizens, and is prepared to follow the guidance and leadership of the profession in helping it meet this challenge.

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Research in the Service of Medicine.

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County Society Notes

ANDROSCOGGIN

December 18, 1958

The annual meeting of the Androscoggin County Medical Association was held at St. Mary's General Hospital in Lewiston on December 18, 1958 with 20 members present. The meeting was called to order by President Paul J. LaFlamme, M.D., of Lewiston.

The minutes of the November meeting and the Treasurer's report were approved as read.

George B. O'Connell, M.D., of Lewiston, was reinstated as an active member following an absence of three years while serving a Residency in Massachusetts.

The chairman of the finance committee, Otis B. Tibbetts, M.D., of Auburn, gave his report.

It was moved and voted to transfer \$1,200 from the checking account to the finance committee. There was some discussion as to what use the funds would be applied when sufficient capital is attained.

It was moved and voted that the 1959 County dues remain at \$15.

Dr. LaFlamme, in the absence of Ralph A. Zanca, M.D., presented a report relative to diabetes detection week. He expressed gratitude for the cooperation received during the campaign and specifically from Bates Mills, the physicians and the pharmacists.

Ralph A. Goodwin, Sr., M.D., Auburn, chairman of the nominating committee, presented the slate of officers for the year. It was moved and voted the secretary cast one ballot for the slate, which follows:

President, Ross W. Green, M.D., Auburn
Vice-President, Paul J. B. Fortier, M.D., Lewiston
Secretary-Treasurer, Donald L. Anderson, M.D., Lewiston
Delegates to Maine Medical Association: Ross W. Green, M.D. (3 years); Romeo A. Beliveau, M.D., Lewiston (2 years) and Paul J. LaFlamme, M.D. (1 year).
Alternates: Ralph A. Zanca, M.D., Lewiston (3 years); Vincent H. Beeaker, M.D., Lewiston (2 years) and Wirt L. Davis, M.D., Lewiston (1 year).

Councilors: Wedgwood P. Webber, M.D., Lewiston (3 years); William V. Cox, M.D., Auburn (2 years) and John T. Konecki, M.D., Lewiston (1 year).

Dr. LaFlamme gave a brief summary of the year's accomplishments of the society and thanked the members and committees for their help and cooperation. He turned the chair over to Dr. Green.

DONALD L. ANDERSON, M.D.
Secretary

LINCOLN-SAGADAHOC

December 16, 1958

The regular monthly meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges, Wiscasset, December 16, 1958. Eleven members were present.

The meeting was called to order by Stanley R. Lenfest, M.D., Waldoboro, President, and the minutes of the last meeting were read and accepted. Eugene E. O'Donnell, M.D., President of the Maine Medical Association, spoke about the experience of Mercy Hospital with aged patients.

Old business was confined to the Diabetes Detection Drive, and all area chairmen were directed to bring their local data for presentation at the January meeting.

A nominating committee consisting of the following members was appointed to choose candidates for officers for 1959: Hamdi Akar, M.D., Deane L. Hutchins, M.D. and Arthur H. Sampson, M.D. The annual election of officers is to be held in January.

A letter of recommendation was sent to the Massachusetts Medical Society, Worcester District, for Everett D. Schubert, M.D., who has recently removed to Oxford, Massachusetts.

Two films, *The Doctor Defendant* and *Human Gastric Function* were shown and well received.

GEORGE W. BOSTWICK, M.D.
Secretary

PENOBSCOT

December 16, 1958

The annual business meeting of the Penobscot County Medical Society was held December 16 at the Tarratine Club in Bangor, with President-elect, Dr. Whitworth presiding. Drs. Harold D. Cross and Ronald R. Striar were elected to membership in the county medical society.

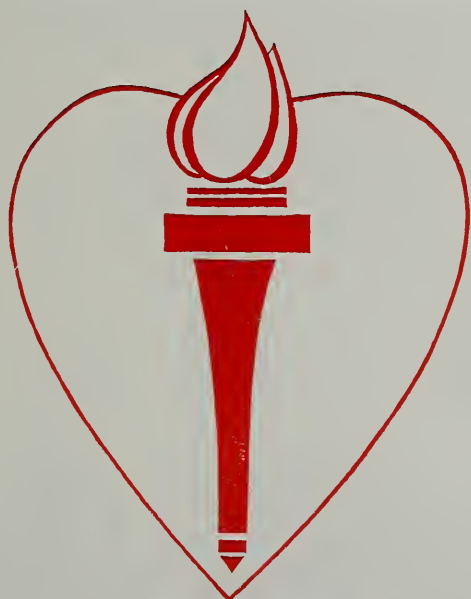
The Nominating Committee presented the following slate of officers for the coming year:

President, John E. Whitworth, M.D., Bangor
President-elect, Albert C. Todd, M.D., Brewer
Member of the Executive Council for three years, Allison K. Hill, M.D., Bangor
Secretary-Treasurer, Warren G. Strout, M.D., Bangor

Eugene E. O'Donnell, M.D., President of the Maine Medical Association, was introduced to the Society and presented a resume of the experiences and statistics dealing with the care of patients over the age of 70 at the Mercy Hospital in Portland. Dr. O'Donnell concluded his remarks by urging that further studies of this kind be made in order that more factual data may be recorded in the study of medical care of the older population group.

Asa C. Adams, M.D., of Orono, Alternate Delegate from the Maine Medical Association to the House of Delegates of the American Medical Association, reviewed his experiences at the House of Delegates meeting in Minneapolis. Dr. Adams was much impressed by the amount of work performed by the delegates during this meeting and was equally impressed by the efficient dispatch with which the meeting was conducted. Dr. Adams complimented Dr. Philip P. Thompson, Jr., of Portland, the delegate from the Maine Medical Association, upon his ability and sincerity in carrying out his duties.

Daniel F. Hanley, M.D., Executive Director of the Maine Medical Association, was introduced as the final speaker of the evening and presented an informal talk which had as a theme the changing social economic structure of the country and its impact upon private medical practice. Dr. Hanley stressed that federal health spending at the moment is at the highest rate ever in history and is 62.6% more than five years ago. He has noted that the Ewing Plan, considered a radically socialistic program in 1947 is now more than 70% enacted into law. The Forand Bill which provides for free medical care for persons receiving Social Security benefits is expected to be enacted into law in some form within the next three terms of Congress. This bill now has the support of the A. F. of L. and C. I. O. groups and is gaining favor with the American Hospital Association and with heavy industries such as General Motors. And, the attitude of the American



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Medical Association appears to be open. It is estimated that the Jenkins-Keogh Bill, which would have provided for self-established pension benefits for the self-employed, now has a less than fair chance to pass the next term of Congress. On the brighter side, Dr. Hanley feels that there has been a rejuvenation in the hierarchy of the American Medical Association, young capable and enthusiastic men are filling positions of importance and the Washington office for the American Medical Association has been reorganized.

All of these speakers stimulated a good deal of discussion which continued far beyond the hour of adjournment at 9:30 p.m.

WARREN G. STROUT, M.D.
Secretary

HANCOCK

December 10, 1958

The annual meeting of the Hancock County Medical Society was held in the Hancock House, Ellsworth, Maine on December 10, 1958.

The following members were present: Drs. William C. Luther, Philip L. Gray, Raymond E. Weymouth, Edward S. O'Meara, George M. Sanger, James H. Crowe, Llewellyn W. Cooper, Herbert T. Wilbur, Jr., Charles H. Knickerbocker, W. Edward Thegen, Eji Suyama, Silas A. Coffin, Ernest L. Coffin, Robert F. Russell, Arthur M. Joost, Jr., and Russell G. Williamson. Guests present included, Drs. Eugene E. O'Donnell, President of the Maine Medical Association, Janet Barnes, Blossom Sanger, Thomas Williams and Thomas Dolan.

Harold S. Babcock, M.D., of Castine was recommended for Senior Membership and it was voted to transfer Richard K.

Jennings, M.D., to the inactive list for two years while he is serving in the U. S. Embassy in Yugoslavia.

Drs. Thomas Williams of Ellsworth, Thomas Dolan of Ellsworth and Elizabeth E. Williamson of Blue Hill were elected to membership in the society.

Officers elected for 1959 are as follows:

President, Arthur M. Joost, Jr., M.D., Bucksport
Vice-President, Llewellyn W. Cooper, M.D., Bar Harbor
Secretary-Treasurer, Russell G. Williamson, M.D., Blue Hill

Censor Committee: William C. Luther, M.D., West Sullivan (3 years); W. Edward Thegen, M.D., Bucksport (2 years) and Llewellyn W. Cooper, M.D., (1 year).

Delegates to Maine Medical Association: James H. Crowe, M.D., Ellsworth and Herbert T. Wilbur, Jr., M.D., Southwest Harbor.

Alternates: Marcus A. Torrey, M.D., Ellsworth and Philip L. Gray, M.D., Blue Hill.

Dr. O'Donnell presented surprising statistics on the medical and financial problems of the care of all patients over 70 years of age for one year at the Mercy Hospital in Portland. A severe need for prepaid health insurance in this age group was discussed.

RUSSELL G. WILLIAMSON, M.D.
Secretary

New Members

ANDROSCOGGIN

Mary T. Dycio, M.D., 30 Hall Street, Lewiston
George B. O'Connell, M.D., 11 Lisbon Street, Lewiston
Harvey J. Proulx, M.D., 92 Pine Street, Lewiston



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Thomas F. Dolan, Jr., M.D., 50 Union Street, Ellsworth
Thomas W. Williams, M.D., 50 Union Street, Ellsworth
Elizabeth E. Williamson, M.D., Blue Hill

KNOX

John S. Hopping, M.D., Beaver Lodge Road, Hope
John A. Root, M.D., 22 White Street, Rockland

PENOBSCOT

Harold D. Cross, M.D., Hampden Highlands
Ronald R. Striar, M.D., 94 Essex Street, Bangor

Deceased

CUMBERLAND

Adam P. Leighton, M.D., 142 High Street, Portland, December 26, 1958

KENNEBEC

Oliver W. Turner, M.D., 42-71 78th Street, Elmhurst 73, Long Island, New York, November 24, 1958

Announcements

Physicians Licensed to Practice Medicine and Surgery in the State of Maine November 14, 1958

THROUGH EXAMINATION

Antonina Oleksijewa-Cap, M.D., N. J. State Hospital, Grey-stone Park, N. J.
Hugh O. de Fries, M.D., U. S. Naval Hospital, Philadelphia, Pa.
John Joseph Doyle, M.D., P. O. Box 53, Hinsdale, N. H.
Francis A. Hurtubise, M.D., Port Colborne, Ontario, Canada.
Hilja Vaher, M.D., 1511 Yesup Ave., Bronx 52, N. Y.
Harold N. Willard, M.D., 14 Nudd St., Waterville, Me.

THROUGH RECIPROCITY

Marvin C. Adams, M.D., 108 Brentwood St., Portland, Me.
Philip Blinder, M.D., Taunton State Hospital, Taunton, Mass.
Charles N. Breed, Jr., M.D., 962 Park Ave., New York, N. Y.
Richard T. Chamberlin, M.D., 23 Prospect St., Waterville, Me.

Prisco F. De Fronzo, M.D., 862 Orange Ave., Newark, N. J.
Ludovic J. De Vocht, M.D., 301 S. Columbus St., Alexandria, Va.

Kevin Hill, M.D., 243 Charles St., Boston, Mass.
Raymond G. Ingalls, M.D., 297 Pleasant St., Berlin, N. H.
Joseph M. Mendes, M.D., 221 Pleasant St., Lisbon Falls, Me.
Leonard W. Parkhurst, M.D., 330 South Ninth St., Philadelphia 7, Pa.

Anne Wight Phillips, M.D., Ogunquit, Me.
Van B. Philpot, Jr., M.D., 1916 Netherwood Ave., Memphis, Tenn.

John Penrose Riesman, M.D., 57 Trumbull St., New Haven, Conn.

Martin Eugene Rose, M.D., 20 Valentine St., Yonkers, N. Y.
Morris J. Seligman, M.D., 10 Davenport St., Augusta, Me.
Joseph F. Stocks, M.D., 24 Forest Park, Portland, Me.
Hugo Taussig, M.D., 440 Wayland Ave., Providence, R. I.

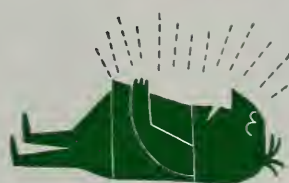
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New M.D.'s in Maine

Richard E. Barron, M.D., R.F.D. #1, Winthrop — General Practice and Surgery.

Anthony L. D'Andrea, M.D., 868 Broadway, South Portland.

Alfred T. Holt, M.D., 70 Allen Avenue Ext., Falmouth (Portland) Anesthesiology.

John S. Hopping, M.D., Beaver Lodge Rd., Hope — General Practice.

R. Paul Johnson, M.D., Fort Kent — Surgery.

American Society of Clinical Hypnosis

The Maine Section of the American Society of Clinical Hypnosis has had official sanction and acceptance.

The officers are: President, Donald Coulton, M.D., Bangor; Vice-President, Clyde I. Swett, M.D., Island Falls and Secretary-Treasurer, J. Paul Nadeau, M.D., Lewiston.

State of Maine Chapter

American Academy of General Practice

The Maine Chapter of the American Academy of General Practice will hold a clinical meeting at the Augusta House, Augusta, Maine on Saturday, February 21, 1959. All physicians are invited. A complete program will be mailed to members of the Maine Medical Association.

Annual Seminar Cardiovascular Diseases

Jacksonville, Florida

February 19, 20, 21, 1959

The Sixth Annual Seminar on Cardiovascular Diseases will be held on Thursday, Friday and Saturday, February 19-21, 1959, at the Prudential Auditorium in Jacksonville, Florida. This course is sponsored by the Northeast Florida Heart Association in cooperation with the Division of Postgraduate Education of the College of Medicine of the University of Florida. This Seminar has been accepted for credit by the American Academy of General Practice.

The speakers for the course are Dr. Samuel A. Levine, Clinical Professor of Medicine, Harvard University Medical School; Dr. Irving S. Wright, Professor of Medicine, Cornell University School of Medicine; Dr. A. G. Morrow, Assistant Professor of Surgery, Johns Hopkins University School of Medicine; and Chief, Clinic of Surgery, National Heart Institute; Dr. Victor A. McKusick, Associate Professor of Medicine, John Hopkins University School of Medicine; Dr. Max Michael, Jr., Clinical Professor of Medicine, University of Florida, College of Medicine; and Executive Director, Jacksonville Hospitals Educational Program, Inc.; Dr. William J. Taylor, Assistant Professor of Medicine, University of Florida, College of Medicine; and Dr. Myron W. Wheat, Jr., Assistant Professor of Surgery, University of Florida College of Medicine.

This course will include recent developments in the diagnosis and treatment of Cardiovascular Diseases. The formal lectures will be correlated with panel discussions and question periods in which the entire staff will participate.

Information may be obtained from Dr. Daniel R. Usdin, Chairman, Cardiovascular Seminar, Northeast Florida Heart Association, 1628 San Marco Boulevard, Suite 7, Jacksonville 7, Florida.

Pineland Hospital and Training Center Pownal - Maine

Carl Hedin General Hospital Red Room

1959

January 8	Lecture — Infections and Mental Retardation	11:00 A.M.
" 15	" — Psychoneurosis and personality disorders	11:00 A.M.
" 22	" — Contributions to the history of medicine	11:00 A.M.
" 29	" — To be announced later	11:00 A.M.
" 15	Clinical Pathological Conference	10:00 A.M.

Medico-Legal Meeting Washington, D.C.

A Regional medico-legal conference will be held in Washington, D. C., March 20 and 21, 1959. All interested physicians are invited. Subjects will include: Impartial Medical Testimony and The Classic Method of Cross Examining an Expert Medical Witness.

Meetings start Friday at 12 noon and continue Saturday from 9 a.m. to 4:30 p.m. For further information contact the Maine Medical Association, P.O. Box 240, Brunswick, Maine.

DENTAL MANPOWER NEEDS

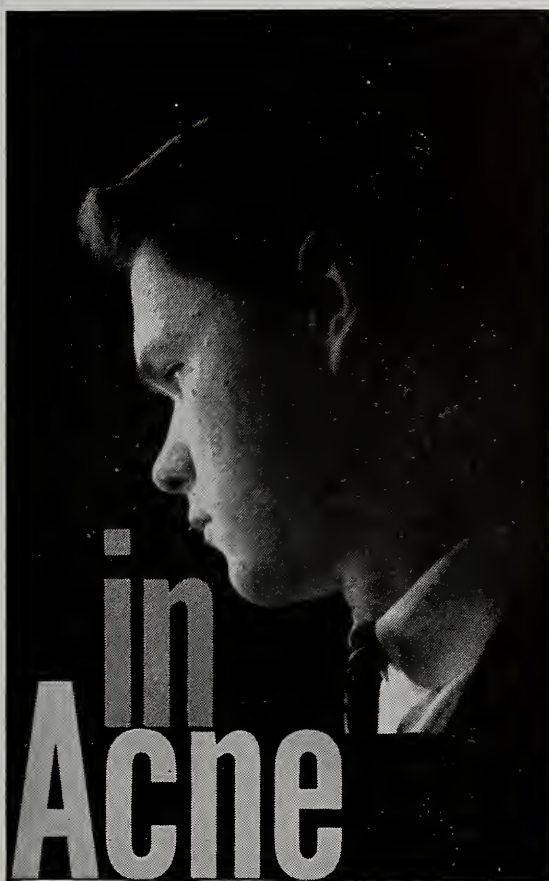
Continued from Page 27

ticipants further resolved to continue their group as a working committee to carry out the recommended activities. Chairman of the Maine meeting was the writer with Miss Cormier as recorder.

RECOMMENDATIONS

The recommendations of the NE Advisory Commission on Dental Education are as follows:

1. That New England accept its responsibility to assure a supply of dentists and dental auxiliary personnel sufficient to meet at least the minimum demand levels forecast by this study. This responsibility includes the establishment of additional facilities in New England.
2. That Massachusetts and Connecticut each take immediate steps to establish a dental school.
3. That provision be made for the expansion of facilities in the two existing dental schools in Massachusetts.
4. That each New England dental school, existing or proposed, provide accommodations for students from all of the New England states under a program of regional cooperation.
5. That the need for a third new dental school in New England be evaluated in the light of action taken on recommendations 2, 3, and 4.
6. That Maine and Rhode Island each take immediate steps to establish a dental hygiene school.
7. That provision be made for the expansion of fa-



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1. Hodges, F. T.: *GP* 14:86, Nov., 1956.

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cilities in the three existing dental hygiene schools of Connecticut, Massachusetts, and Vermont.

8. That the existing and the proposed dental schools also provide facilities for training dental hygienists.

9. That each New England dental hygiene school, existing or proposed, provide accommodations for students from all New England states under a program of regional cooperation.

10. That the training of dental laboratory technicians and dental assistants be fostered and supported.

11. That all the New England states plan to partici-

pate in a long-range program of regional cooperation for the professional preparation of dentists and dental hygienists.

12. That the New England Board of Higher Education cooperate, within the framework of its stated policy, with state dental societies and other groups in working toward the solution of dental manpower problems with a continuing evaluation of progress.

13. That state and local dental organizations sponsor programs designed to stimulate interest in careers in dentistry and dental auxiliary occupations."

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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, February, 1959

Number 2

Dangers Associated With Oxygen Therapy In Upper Respiratory Obstruction

LORING W. PRATT, M.D.*

Many interesting phenomena are observed in the utilization of drugs therapeutically, and one often encounters a particular drug which is either beneficial or detrimental, according to the technique of its administration. This unusual situation is occasionally encountered in the use of oxygen, to aid respiration, for, in the face of seeming improvement, impending disaster may be present. Like its effect in the production of retro-lental fibroplasia, the patient apparently cannot survive without its administration, yet its use also sets the stage for potentially serious complications. In upper respiratory obstruction treated by oxygen, however, the development of these complications is abrupt and may be fatal.

In the presence of an inflammatory upper respiratory obstruction, the use of oxygen is to be considered improper, unless it has already been decided to perform a tracheotomy. This may appear unnecessarily severe, but the rationale for the use of oxygen in these situations will clarify this position. In the first place, inflammatory lesions characteristically increase in size until adequate therapy and body resistance have had sufficient time to control the infectious processes and reduce the inflammatory changes in the tissues, that they may return to their normal state. There is danger, particularly in the presence of such laryngeal lesions.

In atmospheric air, a patient may be unable to breathe well enough to provide an adequate amount of oxygen, and yet, with easy respiration in an oxygen tent he may ventilate and exchange himself without difficulty. The inflammatory lesion may increase both in size and in obstructive characteristics, giving no sign of this change. If the lesion progresses so that the patient is unable to exchange adequately in the enriched atmosphere of the oxygen tent, he may suddenly become cyanotic and hyperpneic. He has no reserve at this time. In this situation, with the attendant apprehension and/or panic which often accompany acute respiratory distress, his increased respiratory rate seriously impairs his ability to ventilate as well as previously and he may die before tracheotomy can be performed and eliminate the obstruction to his upper airway.

The specific details of this problem follow in the theoretical considerations:

THEORETICAL CONSIDERATIONS

Certain basic facts as well as theoretical considerations enter into an analysis of this particular problem.

It is imperative to distinguish between ventilation and respiration.

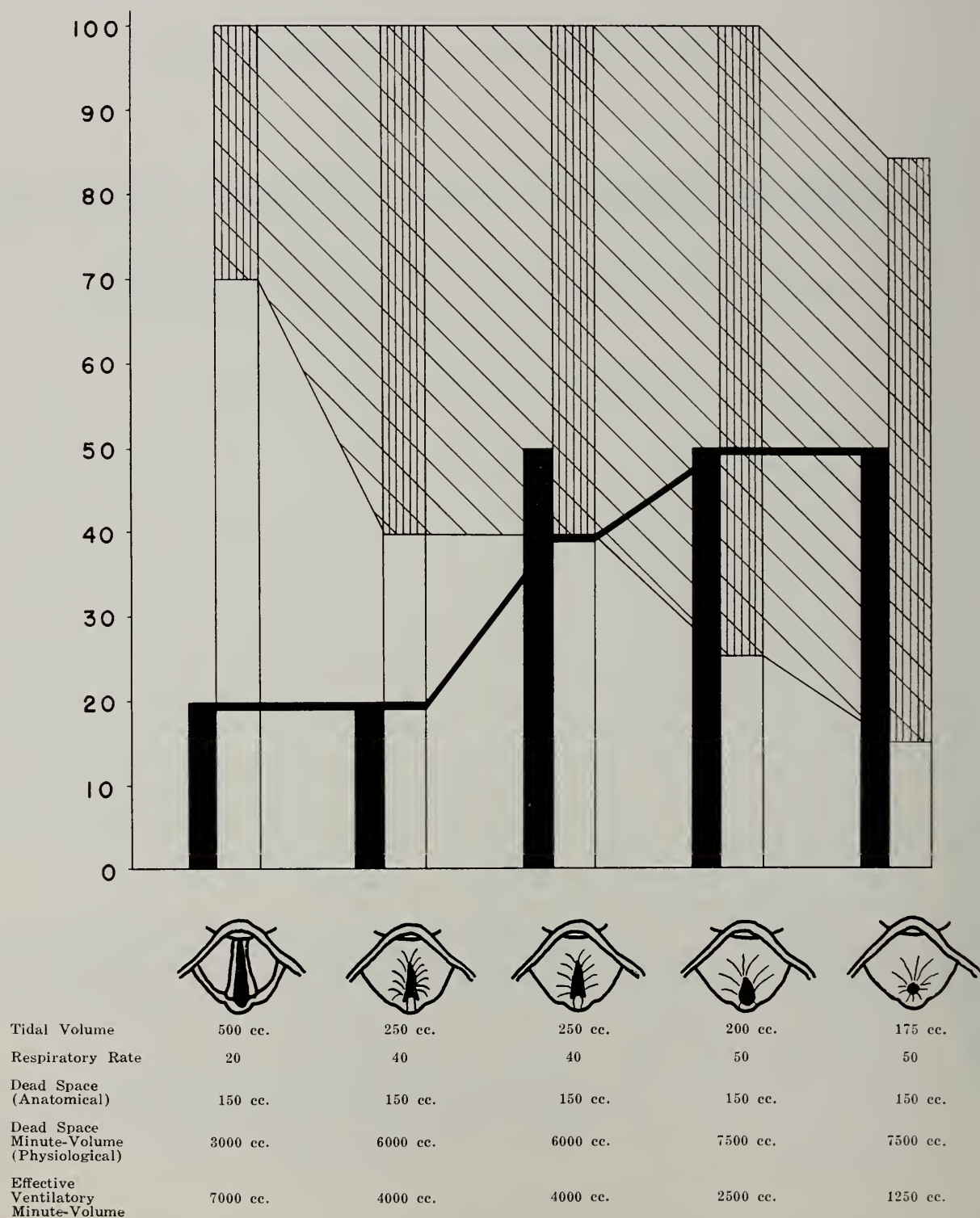
Ventilation is the exchange of gases within the bronchopulmonary tree from nose to alveolus.

Respiration is the exchange of gases across the alveolar membrane from the alveolus to the capillary bed of the pulmonary circulation. In this paper our con-

*Thayer Hospital, Waterville, Maine

FIGURE I

This demonstrates graphically the increase in physiological dead space with increasing respiratory rate due to inflammatory laryngeal obstruction and its consequent effect upon effective respiratory volume. The narrow black bars represent the per cent oxygen tension in the inspired air. This is increased from the 20% normally found in atmospheric air to 50%, an amount which may well be found in an oxygen tent. The values are assumed and calculated empirically, on the basis of a 10-liter minute volume, such as that which might be reasonable for an adult. The shaded area of the graph represents the physiological dead space, the clear area the effective ventilatory volume. The solid black line represents the respiratory rate. Below the graph is a schematic representation of the inflammatory changes taking place in the larynx with consequent reduction of airway. These illustrations are placed below the appropriate graphic representation of the physiologic situation. The last column demonstrates that the minute volume may fall, in this case to 8750 cc, in the presence of extreme hyperventilation and thereby reduce the effective ventilation even further.



cern will be primarily with ventilation; but, it must be noted, that the effect of ventilation upon respiration is inexorable — either for benefit or detriment.

First, a patient breathing normal atmospheric air is getting 20% oxygen. This is the same oxygen intake as that of a person breathing 100% oxygen if he had a lesion obstructing 80% of his airway. In most oxygen tents, there is an ambient oxygen tension of only about 50%. This means that an individual with a lesion obstructing 40% of his airway, in such an oxygen tent, would be in the same respiratory situation as one with a normal airway in atmospheric air. If we assume that 50% blood oxygen tension produces a visible and significant cyanosis, we realize that the individual who was cyanotic in atmospheric air with a lesion obstructing 50% of his airway is able to get along perfectly well in the oxygen tent supplying an atmosphere of 50% oxygen until his respiratory ventilation has decreased to 10% of his original, normal, unobstructed airway. When he becomes cyanotic in an oxygen tent or in an atmosphere of significantly increased oxygen tension he is able to manage for very little longer, as it is only a brief step from there to a fatal hypoxia due to complete obstruction. A cough and a little mucus caught in his vocal cords may represent the final obstructing stress he cannot survive.

Other considerations enter significantly into this problem. For example, as an individual becomes hypoxic, his respiratory rate increases and his respiratory efficiency diminishes. In the early stages of this phenomenon, when this increased respiratory rate is associated with an increased respiratory minute volume, his situation is improved. However, when he begins to breathe more rapidly and less deeply, his respiratory efficiency is reduced. It is easily seen that it is distinctly to his disadvantage that this excessive increase in rate is taking place.

There is an additional and incapacitating complication in this excessive increase in respiratory rate, or the development of hyperpnea. This is the increased work load which increases the system's oxygen requirement. As the respiratory rate increases and the need to move more oxygen arises, the increased rate and its concomitant work increase directly raises the oxygen requirement. Thus the need for oxygen increases in a very real manner, in a situation where it would be desirable to reduce it.

In the accompanying diagram the "dead space" is the air which is contained in the nose, mouth and upper air passages, larynx, bronchi and bronchioles. The only air which is effective in oxygenation of the blood is that which enters terminal bronchioles and alveolar air spaces. The air which remains in the bronchial tree and upper air passages is not effective and therefore occupies the so-called dead space. The volume of the anatomical or physiological dead space remains essentially constant. Thus it is easy to understand why

this space becomes a tremendous problem in a patient who is acutely sick, and why tracheotomy is helpful in relieving it. With each normal respiration of 500 cc., 150 cc. are lost in the dead space. In a patient who is ventilating at a rate of 20, there is a 10-liter minute volume of air. Of this, 2500 cc. are lost in the dead space. If the minute volume were to remain at 10 liters, but it were to be produced by a patient with a tidal volume of 250 cc. and a respiratory rate of 40, the total minute volume is the same as before, 10 liters. The amount of air lost in the dead space is now 6000 cc., or two and two-thirds times as much as previously. The respiratory rate becomes more rapid and also more shallow. This factor becomes increasingly significant when it is added to the already great burden associated with upper respiratory obstruction.

We also encounter a paradoxical effect of the oxygen tension. The control of respiration is mediated chemically by the receptor end organs located in the respiratory center of the carotid body and the arch of the aorta. The receptor end organs in the carotid body are sensitive to an excessive increase in carbon dioxide, but a prolonged increase, of higher than normal level, will paralyze these organs. The other control is oxygen lack and this is mediated by the chemoreceptors of the carotid body and the arch of the aorta. Lack of sufficient oxygen tension in the circulating blood produces its effect in this region. The problem produced by this system arises when, in a patient who has had long standing chronic respiratory obstruction and who has paralyzed his carbon dioxide receptors in the carotid body by the excessive levels carried in his blood, sudden increase in oxygen tension removes the stimulation of "oxygen lack." When tracheotomy is performed, and oxygen is once more freely available to the patient, the stimulation previously provided by the lack of oxygen is no longer present and there is no stimulatory mechanism causing the patient to breathe. Such a development must be handled by artificial respiration and other supportive measures until the patient is once more able to take over the control of respiration for himself.

The effects of tracheotomy, in upper respiratory obstruction, are, therefore, of three different sorts: First, the mechanical obstruction is circumvented so that the airway is mechanically unobstructed. Second, the dead space is shortened. In a tracheotomized adult patient, the reduction in anatomical dead space may equal 50 cc., thus reducing the effective physiological dead space from 2500 cc. to 1500 cc. per minute of respiration. This is of prime importance. Third, tracheal secretions may be readily aspirated and removed from the tracheo-bronchial tree, and fluid obstruction of the lower airway be eliminated, so that the patient is once more able to ventilate and exchange more normally. The effect of these changes on respiratory function is highly advan-

Continued on Page 42

Rehabilitation In A General Hospital

HAROLD N. WILLARD, M.D.*

The statement has been made that 80% of the need for rehabilitation services must be met by the general hospital. Rehabilitation centers must provide the care of those cases needing highly specialized knowledge and techniques — such as paraplegia and quadriplegia — but these centers are expensive and cannot be expected to handle the day-to-day rehabilitation problems seen by the practicing physician.

A rehabilitation project has recently been initiated at the Thayer Hospital. It is the purpose of this paper to describe some of the methods used in the early planning.

DEFINITION OF REHABILITATION

Rehabilitation aims at restoring the patient to his fullest potentials physically, mentally, emotionally, socially, and economically within the limits of his disease or handicap. This definition is broad and applies to the patient with a medical problem or a psychosocial problem as well as the patient with a neurological or orthopedic handicap.

In more specific terms, rehabilitation has the following fields of interest:

a) The promotion of convalescence:

Some patients are slow to recover after an acute incident of illness. Evaluation of the patient's course may show that there are prolonging causes which were not evident on admission, but which can be altered to speed convalescence.

b) Preservation of residual assets:

Example: a 38 year old welder was admitted to a hospital (not a hospital in Maine I am pleased to say) with a severe burn of the right leg. During prolonged bed rest, he developed an irreversible foot-drop on the left. His right leg finally had to be amputated above the knee. Although the patient was provided with a prosthesis and was given an appropriate brace for his foot-drop, he could not walk without crutches and so has never returned to work. The foot-drop could easily have been avoided if attention had been given to exercises during his period of confinement to bed.

c) Training around a handicap:

The patient with a hemiplegia is the most

common problem in this category. It has been shown that approximately 75% of all patients who have sustained a stroke and have survived the initial episode may return to a status of full self-care. Much of this return depends on keeping the patient's motivation to self-help at a high level. To this must be added conditioning exercises, training in performance of the activities of daily living, training in ambulation, and proper bracing when necessary.

d) Prevention of unnecessary recurrence or progress of disease:

Some patients develop illness because of the conditions of life that they have brought upon themselves or that have occurred to them. In the hospital there may be a rapid recovery of well-being, but on discharge they return to the same atmosphere that brought about the disease for which they were admitted. By evaluation of their conditions of life it is possible in a certain number of cases to make changes that will significantly effect the prognosis.

e) Vocational rehabilitation:

This may well overlap with the previous category, but has enough importance so that it is listed separately. It applies to any patient whose disease or accident raises serious doubt if he should return to his job or if he would be accepted back at his job. Here again, careful evaluation of the factors involved is needed before a plan of action can be formulated. Needless to say, the vocation of being a housewife is included in this category.

f) Planning for disposition following hospitalization:

Disposition after prolonged hospitalization is a real problem, particularly in the elderly patient. The family unit is often unwilling to take the patient back into the home, and yet feels guilty about placing him in a nursing home.

QUANTITY OF REHABILITATION IN A GENERAL HOSPITAL

The staff of the Thayer Hospital has developed a screening form for rehabilitation need. On each admission (excluding patients admitted for short term

*Coordinator of Rehabilitation, Thayer Hospital, Waterville, Maine

care such as tonsillectomy, hemorrhoidectomy, or normal delivery), the admitting physician determines whether or not the patient shows a need for services in one of the above categories, or is too sick or too poorly motivated to respond to rehabilitation. In summarizing the last two weeks returns, 39% of the admissions were thought to need rehabilitation.

RESPONSIBILITY FOR CARRYING OUT REHABILITATION

In reviewing those patients checked as needing rehabilitation, it was found that the majority of the services included in the definition of rehabilitation were being carried out, to some extent, by the physician in charge of the case. This brings us face-to-face with the question that is inherent in the definition — "Isn't rehabilitation just good medical care?". It is the basic philosophy of the project that the two are synonymous.

Since rehabilitation is synonymous with good medical care, it must be done by facilitating and cooperating with the physician rather than by competing with him. Experience shows that this can be accomplished, and some of the methods used may be of interest.

THE COORDINATOR

Since the principle duty of the person in charge of rehabilitation is to integrate services to insure maximal benefit to the individual patient, he is usually referred to as a coordinator of rehabilitation. The coordinator should have experience in the practice of medicine, so that he can have an understanding of the problems faced by the physicians with whom he works.

Preferably, the coordinator initially should be on a full-time salary and should be limited to seeing patients in a consulting capacity. Having this status he would be able to develop services for the use of the staff physicians in the same way that a radiologist or a pathologist does.

It would seem that the most logical center for developing rehabilitation services would be in a community hospital. No community or state agency is as oriented to the problems of the individual patient as is the hospital, and also liaison with the physicians of the community is facilitated if the program is based in a hospital. However, it should be clearly understood that the program is applicable to every patient and every doctor within the community even though it must of necessity be located in one particular institution. For a rehabilitation project to compete with other organized service programs would be as wasteful of time and energy, as to have it compete with individual practitioners.

SELECTING THE PATIENTS WHO MAY NEED REHABILITATION

The need for rehabilitation must be assessed by the physician in charge of the case. He knows the overall picture best and can judge not only if rehabilitation is indicated, but also if it is possible. The alternative

scheme of having the coordinator screen the practitioner's cases usually turns out to be moderately irritating.

RESPONSIBILITY FOR PLANNING REHABILITATION

If rehabilitation is judged indicated in an individual patient, the type of service must then be determined. In at least half the cases this is immediately evident; as, for example, physical medicine for the hemiplegic or vocational retraining for the amputee. In the remainder of cases, a careful evaluation is necessary. By evaluation is meant an objective look at the physical, mental, emotional, social, and vocational factors involved, and an interpretation of their relative importance in planning a logical goal.

METHODS OF EVALUATION

The collection of this information should be the responsibility of the coordinator, who should be experienced in the elements of convalescence, restoration of function, factors of motivation, and environmental causes of disease. Much research in these fields is now being done by centers interested in rehabilitation, preventive medicine, comprehensive care, and social (Note — not socialized) medicine. This research, being still in the stage of collected observations rather than controlled experiments, seldom is published in the more traditional medical journals, and therefore does not come to the attention of most practicing physicians.

Evaluation makes use of all appropriate observations that can help in planning for the patient. The nurse, or public health nurse, gives a picture of the patient the doctor may never see. A physiotherapist can add detailed muscle testing and range of motion testing to the observations. A vocational counsellor, always available in this and every other state, through the State Division of Vocational Rehabilitation, can give a detailed job analysis. These are the personnel that are usually available in any general hospital. A psychiatrist would obviously be of assistance in many cases but is usually not available in rural areas. The same is true of a social worker, or an occupational therapist.

When observations have been collected by the coordinator, and the paramedical personnel, an evaluation conference is held with the patient's physician. In this conference, by an exchange of ideas, a plan for ultimate and immediate goals is set up. The patient should be invited to participate in the final discussions so that he recognizes his own responsibility towards his future well-being. When a plan has been formulated, it is the physician who takes over the responsibility for writing the orders, and for following through until the goal is reached or found to be impossible.

RESPONSIBILITY FOR DEVELOPMENT OF REHABILITATION SERVICES

In carrying out rehabilitation, the physician often needs facilities and services that are not already develop-

ed. Here it is the responsibility of the coordinator to work with the hospital, the state and voluntary health agencies, and with the community to develop them and make them available to all doctors.

Some services can be developed by teaching the techniques of rehabilitation to existing personnel. This is particularly true with nursing. The nurse has traditionally taken certain responsibilities for rehabilitation such as proper bed positioning to preserve assets in patients with hemiplegia, health education of the diabetic, and helping to teach the family about the nursing care of patients ready for discharge. The coordinator, through methods such as nursing rounds, weekly classes, or case presentations, can teach the more advanced techniques of rehabilitation which may be ordered by the physician as a result of evaluation conferences.

In some communities, facilities are at hand but are not effectively used. In New York City, amazingly few physicians have a good working knowledge of the Division of Vocational Rehabilitation. Yet these same physicians were frequently faced with the frustrating

problem of providing expensive diagnostic or rehabilitative services to patients who otherwise could not return to work. They do not realize that Vocational Rehabilitation takes responsibility for these services as well as vocational retraining and vocational placement.

CONCLUSIONS

As rehabilitation is defined, it has broad responsibilities and is opening up new horizons of treatment to patients who have dysfunction.

Even in a general hospital, a significant number of admissions show the need for such rehabilitative services.

Rehabilitation is synonymous with good medical care, so must not be developed as a new specialty, but rather as a service that is available to any physician, and increasingly practiced by the physicians.

To develop a program of rehabilitation, certain methods are suggested so that services can be given without interposing a third person between the doctor and his patient.

DANGERS ASSOCIATED WITH OXYGEN THERAPY — *Continued from Page 39*

tageous and is accomplished by a single simple surgical procedure.

CONCLUSIONS

1. Oxygen should not be administered in cases of acute inflammatory upper respiratory obstruction until a decision as to the desirability of tracheotomy has already been made.

2. The hazard of administering oxygen in cases of upper respiratory obstruction, especially in inflammatory disease, lies in the fact that further observation of progression of the obstruction is obscured by the oxygen.

3. In hyperventilation, the apparent increase in the

"dead space" is of particular importance and may well contribute to the death of a partially-obstructed patient.

4. Once tracheotomy has been decided upon, oxygen can and should be given freely. However, clinical improvement in the patient should not militate in favor of delay in performing the tracheotomy.

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177 Main Street, Waterville

A Program Of Refresher Workshops In Medical Technology

IRVING I. GOODOF, M.D.*

The problem of maintenance of laboratory standards in a rural area necessitates constant vigilance and a calculated effort to find effective means of stimulating interest. In the central Maine region, supervision of several small laboratories is the responsibility of a single pathologist, a situation which is duplicated in many other areas throughout the nation. An attempt to upgrade or develop laboratory standards on an individual basis is time-consuming and sometimes impractical. Accordingly, with the encouragement of the Maine Society of Pathologists, the approval of the Maine Society of Medical Technologists, and the cooperation of the Bingham Associates Program, a series of workshops was planned and technicians from hospitals in a 75-mile radius invited to take part.

The workshops were planned for every other Wednesday evening from 6 to 10 o'clock, to be held at the Thayer Hospital. Twenty technicians expressed interest, and eventually arrived to participate in the program. Ten sessions were planned, to include most of the reasonably common procedures carried out in the modern hospital laboratory. Five programs have been presented thus far, and have been enthusiastically received. The participants have maintained their attendance despite hardships of weather and driving conditions.

It is still too early to recognize results of these efforts objectively. The participants do, however, have a greater understanding of the subjects covered, and cannot help doing a better job.

A protocol is prepared for each workshop session, and a copy made available to each participant. A sample protocol for the first workshop follows.

WORKSHOP IN HEMOGLOBINOMETRY

This workshop is designed as a review, and, in some instances, modernization of technics for the common laboratory procedures. Some of the methods suggested in these sessions may differ from those in use in your own laboratory. When this is the case, your own judgment will determine whether changes in procedure are indicated. The methods we will present, and which you will carry out, are standard accepted procedures which have been proved satisfactory and efficient. In some instances additional procedures will be presented for consideration, where newer, possibly simpler methods have been devised.

It is hoped that all participants will find these sessions of value, and that the result will be more uniform and more accurate clinical laboratory activity in this area.

Calibration of glassware: It has been shown that at least 10% of the best glassware obtainable is unsatisfactory for use. This includes pipettes, spectrophotometer tubes, flasks, special tubes (e.g. -sugar tubes) and red and white cell counting pipettes. When this error is added to the common inaccuracies of pipetting and the errors inherent in the methods used, the total error of a procedure can be considerable. Accordingly, all measuring glassware should be calibrated or at least checked before being put into use.

The simplest method of calibration, although not necessarily the most accurate, is the photometric method, and will be carried out here.

a) Spectrophotometer (or colorimeter) tubes:

In each of five tubes:

1. Place 0.02% Potassium dichromate.
2. Wipe tubes well.
3. Read in spectrophotometer (or colorimeter) at 450 mu using water as blank.
4. Rotate tube 180° noting galvanometer scale. If a deflection occurs the tube is scratched or imperfect and should be discarded. Always read with label facing you.

Readings (O.D.) 1—2—3—4—5—

Mean —

Deviation 1—2—3—4—5—

Tubes which differ more than ± 0.002 O.D. should be rejected.

b) Sugar tubes:

To each of six sugar tubes add:

1. 1 ml. of 0.5% Potassium dichromate delivered with same 1 ml. volumetric pipette.
2. Dilute to mark with distilled water.
3. Read in same cuvet at 450 mu using water as blank.

Readings (O.D.) 1—2—3—4—5—6—

Mean —

Deviation 1—2—3—4—5—6—

Reject any if deviation more than ± 0.002 O.D.

c) Hemoglobin pipettes

1. To each of six previously calibrated spectrophotometer tubes add 5 ml. of 0.1% sodium carbonate using one 5 ml. volumetric pipette.
2. Deliver 0.02 ml. of whole blood into each tube with numbered pipettes.
3. Read in spectrophotometer (colorimeter) at 540 mu using 0.1% sodium carbonate blank.

Readings (O.D.) 1—2—3—4—5—6—

Mean —

Deviation 1—2—3—4—5—6—

Reject all pipettes beyond 0.002 O.D.

Similar methods are available for checking volumetric pipettes, flasks, etc.

Absorption of light by colored solutions: The wave lengths of visible light range from 400 millimicrons (blue) to 700 millimicrons (red). The common methods of expressing the amount of light absorbed by a solution are:

*Department of Pathology, Thayer Hospital, Waterville, Maine

1. Per cent Transmittance (%T): That fraction of light which passes through the colored solution when a blank solution is set at 100 galvanometer units (100%T). The galvanometer has 100 equal units on its scale. As the concentration of the colored solution increases, the amount of light absorbed increases and the %T decreases in a logarithmic curve.
2. Optical Density: This unit is a logarithmic conversion of %T. It is arranged for convenience in calculation so that as the concentration of the colored solution increases, the optical density increases in a straight line.

Determination of hemoglobin: The colorimetric determination of hemoglobin is most conveniently and inexpensively carried out by the oxyhemoglobin method. Recently the cyanmethemoglobin procedure has developed many supporters because of the permanence of its color and the fact that it measures all of the abnormal hemoglobins, some of which are not converted to oxyhemoglobin by the usual means.

At this workshop, the oxyhemoglobin method will be carried out, using the cyanmethemoglobin procedure for calibration.

1. Into previously calibrated spectrophotometer tubes place 3, 4, 5, 6, 8 and 10 ml. of 0.1% Na_2CO_3 (0.04% ammonia can be used instead).
2. Deliver into each tube 0.02 ml. whole blood (from previously calibrated pipettes).
3. Read %T at 540 mu and record.
4. Dissolve 1 Acute tablet in 250 ml. distilled water in a volumetric flask.
5. Prepare a blank by adding Acute to a spectrophotometer tube.
6. Add 5 ml. Acuglobin (from ampoule) to a spectrophotometer tube.
7. Add 2.5 ml. Acuglobin and 2.5 ml. Acute to a third tube.
8. Read the last 2 tubes at 540 mu with blank at 100 %T and record.
9. Add 5 ml. Acute to a spectrophotometer tube.
10. Deliver 0.02 ml. whole blood to above tube.
11. Read at 540 mu with Acute blank, after 10 minutes.
12. Using the readings obtained in No. 8, construct curve of cyanmethemoglobin standard. Calculation of value of standard is value printed on ampoule times dilution factor (251).
13. Read actual value of hemoglobin in whole blood from this standard curve (Reading No. 11).
14. Construct curve for oxyhemoglobin method, using now known value for hemoglobin of unknown blood.
15. Calculations of values for varying dilutions are based on dilution factors.

$$3 \text{ ml. tube} = \frac{251 \times \text{actual value}}{151}$$

$$4 \text{ ml. tube} = \frac{251 \times \text{actual value}}{201}$$

$$5 \text{ ml. tube} = \frac{251 \times \text{actual value}}{301}$$

$$6 \text{ ml. tube} = \frac{251 \times \text{actual value}}{401}$$

$$8 \text{ ml. tube} = \frac{251 \times \text{actual value}}{501}$$

$$10 \text{ ml. tube} = \frac{251 \times \text{actual value}}{501}$$

Calibration of spectrophotometer for red blood counts: This method of determining the red blood count depends on the dispersion of light by particles in suspension. The results are reliable within a reasonable range of values, provided the cells are uniform in size and shape. It has been shown that between three and six million cells per cubic mm. of blood, the result of this determination is at least as accurate as a random count done by a qualified worker using ordinary glassware and care.

This procedure basically depends on determination of the red blood count as accurately as possible by the usual counting methods. Theoretically, perfectly calibrated red counting pipettes should be used. However, with slightly more effort, any good quality pipettes will be satisfactory.

A sample of whole blood, preferably heparinized, is counted using 12 good quality red counting pipettes. The mean of these counts is used as the accurate red blood count. The standardization curve is prepared as follows:

1. Into 5 tubes place 6, 8, 10, 12, 14 ml. Gower's solution.
2. To each tube, using prechecked pipettes, add 0.02 ml. whole blood.
3. Transfer each specimen to a prechecked spectrophotometer cuvette and read at 540 mu. Construct curve using 10 ml. specimen as the actual blood count as previously determined.

Calculations for other values are as follows:

$$6 \text{ cc} = \frac{501 \times \text{count}}{301}$$

$$8 \text{ cc} = \frac{501 \times \text{count}}{401}$$

$$12 \text{ cc} = \frac{501 \times \text{count}}{601}$$

$$14 \text{ cc} = \frac{501 \times \text{count}}{701}$$

The various commercial suppliers have been most kind in providing certain expendable materials for use in the workshops. During the course of the sessions it is pointed out that in most instances other equally satisfactory products are available. Sources of supply are made known, and recommendations of more satisfactory items are discussed.

To date, workshops have been held in hemoglobino-metry, glucose determinations, blood banking, and two sessions on liver function studies. For the immediate future workshops are planned in bleeding disorders, protein determinations, determination of cations, and bacteriology.

SUMMARY

A sample protocol for a workshop in medical technology is presented. It is felt that such workshops are of value in elevating standards in this field.

Diverticular Disease Of The Colon

A Review

JOHN F. REYNOLDS, M.D.*

In the course of recent years, the attention of the medical profession has been increasingly turned toward the problems involving the older segment of our population. Patterson¹ has stated that in 1900 only one person in twenty-five was sixty-five years of age or older, and estimates that by 1975 the figure will be one in seven. The aging population contributes greatly to the more recent surgical interest in problems relative to colonic diverticulae. To avoid the use of the terms diverticulosis and diverticulitis as sharply defined entities, we prefer the generic name of diverticular disease of the colon, phases of which may be very mild or of severe nature requiring rather urgent surgical treatment. It has been variously estimated that between 10 and 20% of all persons over the age of forty-five will show, by barium enema examination, x-ray evidence of multiple colonic diverticulae. Young and Young² reported an incidence of 5.2% in seventy thousand colons examined by barium enema and autopsy. It has been stated that at the Massachusetts General Hospital approximately one-third of the patients having barium enema studies show evidence of diverticular disease, and that of these 8.9% show evidence of inflammatory type of disease. It is a well supported clinical impression that incidence of the disease is increasing with aging population, and it is also to be noted that the disease is rather unusual below the age of forty. In 75 to 80% of cases, the disease process involves the sigmoid colon, though we have seen the entire colon and cecum rather diffusely involved. The sex distribution of the disease is about equal.

The etiology of this condition is unproven, but it is thought to be due to a weakness of the muscular layer of the sigmoid colon at the site of perforating arterial branches. Due to the mechanics of straining at stool with the increased age incidence of constipation, small sacs form which later push through the muscular wall and appear as diverticulae being covered only by serosal and mucosal bowel layers. These sacs are apt to be narrow-necked and with the pathogenicity of the stool plus the mechanical difficulties of emptying these sacs, inflammatory changes are apt to be set up. Diverticulae in the right colon are much less apt to cause symptoms presumably because of the less solid character of the contained stool, and the relatively greater

bowel lumen. By definition, diverticulae of this type cannot be considered as true diverticulae since they do not contain all of the usual bowel layers; the muscular layers being missing.

In the words of Colcock³, if a patient over forty years of age is overweight and complaining of repeated attacks of lower abdominal distress this disease entity should always be considered. Since diverticulae occur most frequently in the left colon, inflammatory processes involving this area usually involve the sigmoid segment, rarely below. For this reason then the pain and tenderness are likely to be most marked in the left lower abdominal quadrant. Indeed diverticulitis may have an acute onset and present all the signs and symptoms of acute appendicitis excepting the fact that all are referred to the left lower quadrant rather than the right. Along with the varied clinical manifestations previously mentioned, the diagnosis of this group of diseases is confirmed by x-ray study. The most common history obtained in patients with this entity is that of intermittent attacks of abdominal distress, flatulence and constipation followed by gradual relief of symptoms as the inflammatory process subsides, depending on the degree and extent of involvement. The antithesis is the acutely ill patient who may progress to perforation of the colon and a free peritonitis if the perforation is not walled off. The incidence of this latter occurrence is fortunately small.

Rectal bleeding, in the past, has not been considered an important symptom in the diagnosis of diverticular disease. It often has been felt that complicating conditions such as polyp or carcinoma of the rectum must be present in order that there be more than minor incidence of bleeding. This has been well refuted by cases in our own experience in which no other evidence of disease could be found, and in which there was massive diverticular disease, on some occasions involving almost the entire colon from cecum to rectosigmoid junction. Knight⁴ reported an incidence of 12.4% of a series of one hundred eighty-five patients who gave a history of gross bleeding from the rectum. Review of these twenty-three cases showed they had received complete evaluation of their bleeding and no other possible cause could be found. In a second series of cases reported by Knight there was an incidence of 31.7% with a history of gross bleeding in a series of one hundred and four patients. For some reason never adequately explained, the incidence of gross

*Surgical Staff, Thayer Hospital, Waterville, Maine

bleeding from the rectum seems to be higher in those patients who do not have the inflammatory type of disease but rather have multiple diverticulae which are relatively asymptomatic. There does seem however to be correlation between the severity of bleeding and the extent of diverticular involvement of the colon. An occasional case has been seen in which diverticulae involved the entire colon and in which bleeding was mild. Certain reports have given support to the thesis that the severity of bleeding may be an indication of the extent of the disease. This observation seems justified in view of cases reported in which exsanguinating hemorrhage from diverticular disease most often occurs when the pathologic process involves the colon extensively, yet inflammation is minimal. The exact mechanism of bleeding remains obscure since the lack of association with any inflammation has been noted. One would then suppose that local trauma producing ulceration with subsequent hemorrhage would be a most important etiologic factor in hemorrhage. We will later report a patient who has had repeated episodes of rectal bleeding in whom extensive diverticular disease is present throughout the large bowel and in whom colostomy has been done in an attempt to localize the area of bleeding. Knight reported a few cases where colostomy was done with results sufficiently dramatic to suggest that it may be the safest way to stop severe bleeding in extensive diverticular disease. If subsequent experience confirms the fact that bleeding from the right colon seldom occurs, transverse colostomy as was performed in our particular patient may suffice in most cases. The proper course for subsequent therapy necessarily requires individualization and cases are at hand where left colectomy has been followed by recurrent episodes of bleeding from the right colon.

Patients with carcinoma of the colon and patients with diverticular disease fall into the same age group. Obstructive symptoms such as colicky pains, distention, anorexia are apt to be seen in both. Colcock³ states colic is more frequent in diverticular disease with inflammation. Proctoscopic examination is sometimes of value in differentiation of these two disease processes but, more often, is not, the reason being that the sigmoid region of the colon cannot be adequately visualized by the use of the sigmoidoscope, though the rectosigmoid junction certainly can be visualized. The incidence of the disease is higher in the more proximal portion of the bowel. When x-ray study by barium enema demonstrates a reasonably long segment of involved bowel, the presence of actual diverticulae, obstruction without demonstrable tumor, and a spastic bowel with wide transversely arranged folds, one can be reasonably certain that diverticular disease is the basic pathologic state. On the other hand, Pemberton et al⁵ found that carcinoma could not be excluded by any clinical means in over twenty-five per cent of their reported series of cases. As each of these conditions becomes more advanced the differential diagnosis be-

comes increasingly difficult and even at laparotomy the surgeon is frequently unable to distinguish between carcinoma with superimposed infection and inflammation and diverticular disease. This is adequate reason for extensive removal en bloc with radical resection, where a definitive diagnosis cannot be made. This of course may, in the presence of the extensive diverticular disease, increase the operative risk, but certainly the risk is a justifiable one.

In recent years there has been a gradual trend toward extension of operative procedures for this group of diseases where formerly the indications were solely the serious complications such as perforation, obstruction and fistula formation. It has become increasingly apparent, that more serious consideration of surgical treatment should be given to any patient subject to recurrent manifestations of diverticular disease. One of the greatest complicating factors in clinical pictures of affected patients, has been the extreme difficulty at times of differentiating extensive inflammatory disease from malignant disease involving the colon. It is becoming more and more apparent that surgeons as a group are concerning themselves not only with the severe complications; but since the advent of antibiotics, improved operative techniques, better anesthesia, and the availability of whole blood, they are also concerned with lesser stages of the disease. This prevents many patients from being afflicted with semi-invalidism and extensive and expensive hospitalization. It also becomes increasingly evident because of economic reasons, as well as physical, that the older population is becoming less and less able to withstand extensive hospitalization and surgery, although the mortality of operative procedures involving this disease group, has progressively diminished. It seems likely that diverticular disease and its complications will continue to present serious diagnostic and therapeutic problems to the abdominal surgeon.

The major acute complication of this disease is perforation which is not especially common, but extremely serious when it occurs. The usual clinical impression is that of a fulminating infection or rupture of a hollow viscus and certainly at this time drainage must be established and also a major decision made as to whether or not proximal vent should be established. It is certain that military surgical experience securely establishes the value of a proximal vent in the transverse colon in case of either acute perforation or obstruction. Certainly, in the latter instance this is proper treatment, and it is surely true that the most respectable mortality in treatment of complications is in the patients who had preliminary colostomy. It is our firm belief that when the least doubt occurs three-stage surgical attack of any complication of this disease is best. The colostomy should be completely diverting in type and consequently will lead to improvement of the diseased part of the colon.

The other major complications have in part been

dealt with in the earlier portions of this article, namely bleeding, and although carcinoma cannot truly be considered as a complication, it certainly is a complicating factor in the treatment of this group of diseases, insofar as differentiation is concerned. It is generally agreed that the ultimate goal of any operative procedure should be wide resection and re-establishment of the continuity of the bowel as soon as the patient's condition permits. It seems to us that there is a true middle course which is both conservative and yet which does not lean to the one-stage type of procedure. Arguments are brought forth that, because of expense, prolonged disability and a potential delay when a positive differential diagnosis of carcinoma cannot be made, perhaps one should attempt a one-stage procedure. This does not seem to rely strictly on surgical indications insofar as treatment of the disease is concerned, but seems to rely more on economic indications. It is our feeling that a three-stage procedure should be the treatment of choice. Perhaps in the majority of cases a two-stage procedure, namely resection and establishment of a proximal colostomy, can be safely and securely done. Of course in the instance of an acute obstructive process, the three-stage procedure is a necessity. Again, however, one sees relatively few patients with an acute obstruction on the basis of diverticular disease. The vast majority are those who can be treated by resection with a concomitant proximal vent in the transverse colon and the second stage requiring only a short period of hospitalization for closure of the transverse colostomy once the disease has been proven eradicated, and the function of the line of anastomosis has been securely established. We again emphasize that in too many patients with this disease entity that non-surgical management is frequently prolonged. In other words it is our feeling that any set of circumstances proven due to this disease, not consistently and easily controlled by good medical management, constitutes an indication for operative intervention. Certainly in the earlier stages of the disease, two-stage procedure can as a rule be carried out provided it be possible to adequately prepare the patient preoperatively and there is no acute obstruction of the colon.

CASE REPORT NO. 1

Early in our surgical experience in private practice, a 36-year-old patient was referred with typical acute symptoms and signs of diverticular disease with perforation. Examination revealed definite tenderness in the lower portion of the abdomen, more severe just to the left of the midline with rebound tenderness and associated with spasm. The patient had an elevated white blood count of 22,000 on admission. Exploratory laparotomy was advised and done. A collection of pus was found in the pelvis, incident to an acute perforation of an area of inflammation of the sigmoid colon. This area was drained and a transverse colostomy was concomitantly established following which

the patient recuperated nicely from his acute inflammatory process. Six months later sigmoidoscopy and barium enema were done, the patient in the meantime had a satisfactorily functioning transverse colostomy which had largely diverted the fecal stream. Because he had no interim symptoms, and because his findings including sedimentation rate, x-rays and sigmoidoscopy were within normal limits, it was felt that this patient's colostomy could be closed without primary attack on the area of original difficulty. This was done and for about eight months this patient got along very satisfactorily, but then had recurrence of symptoms and elected to seek the care of another surgeon. This was a very adequate lesson to us that once the diagnosis of diverticular disease had been established, resection must be done before closure of colostomy else a high incidence of recurrence be expected.

CASE REPORT NO. 2

A sixty-eight year old female was first referred to us in early 1956 with the history that in the previous eight years she had had six or seven episodes of rather severe rectal bleeding, accompanied by a feeling of fullness and distension in the upper abdomen. During the first few episodes, transfusions had been required. She recently had, in December of 1955 and January of 1956, recurrent history of passing dark blood where as on previous occasions she had passed considerable bright red blood. The symptoms of fullness and distension in the upper abdomen were always relieved within a relatively short time following the onset of bleeding, although on several occasions the bleeding had not been apparent for twenty-four to thirty-six hours following cessation of the mild discomfort. This patient had repeated x-ray series which revealed multiple diverticulae throughout the entire colon, but at no time had there been any demonstration of an apparent inflammatory process or any retention. At the time she was first seen, because of other associated diseases, it was felt that this patient was not in serious difficulty or an adequate surgical risk, and conservative treatment was advised. In the ensuing three years, she has had four episodes of rectal bleeding only one of which required the administration of more than one unit of blood. This patient at no time exhibited any shock, and we finally felt that it was necessary to attempt to delineate the area of involvement since, by x-ray and other means of evaluation, no definitive area of bleeding could be determined. Accordingly she was submitted to exploration and right transverse colostomy about one year ago. This was done at the time of a remission insofar as bleeding is concerned and thorough examination of the entire colon revealed no area where the bleeding might seemingly have occurred. There was no other indication of associated disease process in the colon, and the rectum and rectosigmoid had been proven innocent by sigmoidoscopy prior to the establishment of the right transverse colostomy. The pa-

tient convalesced well following this procedure, and has subsequently had two episodes of further rectal bleeding with slight reflux through the distal limb of the transverse colostomy and no evidence of any bleeding from the right side of the colon. Because of associated disease this patient has been reluctant to undertake further surgery in the nature of resection of the left colon, and in truth, we have been somewhat reluctant to advise it, recognizing the associated disease processes, and the fact that further bleeding could occur from the right colon. At this writing, we have not succeeded in convincing this patient or ourselves that left colectomy is necessary, since in truth she has at no time in our experience with her, been in serious condition. Though this patient is not happy with the functioning transverse colostomy, she is cognizant of the risks and dangers of both operative and nonoperative treatment, and up to this point has elected to forego definitive surgery. Though colon resection might well effect a cure for this individual, at this point one prefers to deal with the situation as individual considerations require.

CASE REPORT NO. 3

A fifty-six year old man who was seen about one and one-half years ago with a history of abdominal discomfort, crampy in nature, with two or three episodes a year of diarrhea for a day or two. During the previous month, however, he had been having diarrhea for two or three days at a time with a definite history of decreased calibre of stool, and abdominal cramping relieved by passage of flatus. It is interesting, in retrospect, that we had previously seen this patient two years previously because of an unrelated condition, but at that time he complained of occasional rectal bleeding. Sigmoidoscopy was done on that occasion, with findings essentially within normal limits and barium enema study had been advised. Because of business pressures the patient had elected to postpone it, and was not seen again until the onset of the present illness. He had no recurrence of his rectal bleeding, and one presumes in the light of the history of seven or eight years of episodes of diarrhea two or three times a year, along with the bleeding which was noted originally, that this patient might have had early changes consistent with diverticular disease two years previous to the present illness. At the time of the original examination in the present illness a definite mass was palpable in the descending colon, which was nontender, and which was of considerable size. Barium enema revealed extreme deformity of the sigmoid colon consistent with inflammation in the lower portion of the descending colon. Proximal to the area, there was in-

complete obstruction with narrowing and a semicircular filling defect which the Roentgenologist and myself both felt indicative of an expanding lesion evidently malignant. This patient was prepared with gastrointestinal cleansing and Neomycin, there being no evidence of acute obstruction, and it was felt that preliminary colostomy was not necessary. At laparotomy a very large tumor involving at least six inches of the descending colon was found. A very adequate resection insofar as a cancer operation was performed because a differential clinical diagnosis could not be made at the operating table. Anastomosis was performed between the transverse colon which had been mobilized, and the rectosigmoid junction and a right transverse colostomy was also established. Much to our pleasure, although unexpected, the lesion turned out to be entirely inflammatory with no evidence of malignancy. Some four weeks later, following sigmoidoscopy and barium enema which proved an adequate anastomosis, the transverse colostomy was closed and the patient enjoyed a very normal convalescence and routine check-up at six month intervals has shown no evidence of further gastrointestinal tract disease.

SUMMARY

Some of the more recent literature concerning diverticular disease of the colon has been reviewed as to diagnosis, differential diagnosis and treatment. It has been stressed that the nomenclature of diverticular disease, rather than diverticulitis and diverticulosis, better expresses all phases of the particular problem with which we have been concerned. It is a recognized fact that the incidence of this group of diseases increases with the increased population age, and we have stressed the rather high incidence of massive rectal bleeding which, we believe, has not been adequately emphasized as an important symptom. Surgical treatment has been well outlined in other literature, and is simply reviewed here on the basis of our own experiences. Pertinent case presentations have been made in brief. We feel they represent a cross-section of the type of problem one encounters in dealing with diverticular disease of the large bowel.

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216 Main Street, Waterville

The Case Of The Stubborn Stapes

JOHN H. EVES, M.D.*

The clinical entity known as Otosclerosis has a long and controversial history. In 1735 Valsalva described ankylosis of the stapes observed post-mortem in a patient known to have been deaf. Toynbee¹, in the year 1841, described thickening of the ankylosed stapes and overgrowth of the anterior two-thirds of the stapes by bone from the vestibular surface of the labyrinth. The feeling at that time was that the bony changes observed were secondary to mucosal changes within the middle ear; a form of "dry catarrh." This term "sclerosis" first was used by von Troltsch in reference to this condition, following the theory of the day.

It remained for Politzer² in 1893 to remove this condition from the classification of middle ear catarrhs and assign it to the proper position as a primary disease of bone. Even he retained the term Otosclerosis because of its universal acceptance, although he did suggest that it might more properly be termed "capsulitis labyrinthi." About this time Siebenmann confirmed Politzer's findings and offered the term "otospongiosis" as more accurately describing the softer character of the new bone found in this condition. The term Otosclerosis, though admittedly a misnomer, has been retained largely on the strength of its acceptance by Politzer.

Politzer not only properly classified the condition, but has given us an exhaustive description of the pathology, symptomatology, natural history and treatment which holds true more than fifty years later. According to his classical description, Otosclerosis is a disease characterized by conductive type deafness; showing typically a decreased acuity for the lowest tones and a gradually increasing level of acuity for successively higher frequencies. The acuity of hearing is seen to improve when the patient is in a noisy environment. This phenomenon, called paracusis Willisii, is an apparent increase only, since the masking effect of the noise causes people to speak more loudly and unconsciously compensate for the patient's hearing defect. Subjective noise or tinnitus is a frequent finding, but not essential to the diagnosis. In the natural history of the disease one observes that pregnancy has an unfavorable influence, producing marked progression of the hearing loss. This has been noted also at puberty and the menopause.

In 1893 Politzer read a paper before the Pan-American Congress at Washington in which he pre-

sented a description of the pathology of Otosclerosis based on 18 cases examined post-mortem. He described the formation of new bone in the capsule of the labyrinth and a rarified condition of other parts brought about by atrophy. The newly formed bone is characterized by the immense size of its spaces and Haversian canals. The spaces are filled with connective tissue, rich in cells, which surround the blood vessels. The area of an otosclerotic focus was noted to be readily distinguished from the normal osseous tissue by its deep staining with carmine. Our current findings go no further than this except to note that, after examination of large numbers of temporal bones over the years, it is felt that only about 20 per cent of all cases of otosclerotic involvement of the labyrinthine capsules encroach on the oval window to produce clinically recognizable disease. This has been termed "clinical Otosclerosis." From this term has arisen a new concept of terminology. At present, all cases of deafness which are conductive in type, have a negative Rinne test, a patent eustachian tube and no history of previous middle ear infection are classed as "clinical otosclerosis." It is interesting to note that the majority of these cases respond well to the current surgical treatment for the disease even though no pathological diagnosis has been confirmed.

The etiology of Otosclerosis is still one of the unsolved problems of otology. Prior to the turn of the century numerous diseases were suspect. It had been observed that heredity played an important part, but just how was not understood any better than now. Gout was the favorite culprit in the English school of thought for many years. Gradenigo believed that hereditary syphilis was a prerequisite; a belief readily understood when one recalls that the treponema was the universal imitator. With the advent of more accurate serology and antibiotic therapy this particular theory has been abandoned. Rickets and scrofula have also been exonerated, though they were considered at one time in juvenile cases. Current theories are quite as varied as those of former years, but not necessarily any more accurate. Because the endocrine crises have been shown to exert profound influence on the condition, efforts have been made to incriminate various physiologic processes. Thus far, all attempts to demonstrate endocrine, dietary, vitamin, mineral, or vascular abnormalities have failed. Mayer has ascribed the changes to the healing of spontaneous fractures. Defects resembling spontaneous fractures have been discovered but no related otosclerotic foci have been demonstrated. Lempert and Wolff feel that there is a

*Department of Otolaryngology, Thayer Hospital, Waterville, Maine

vascular change involved on the basis of findings in the ossicles, but no connection has been proven. Paget's disease and Osteogenesis imperfecta have been considered, but neither has a strong following at present.

Possibly the best supported theory of our time is that of Perozzi and Siebenmann which dates back to the second decade of this century, but has recently found support in the work of Anson and Bast. Perozzi first described an area in the labyrinthine capsule just anterior to the oval window composed of connective tissue surrounded by unossified cartilage. By examining fetal temporal bones in the various stages of development he observed that this region was the last to show ossification. A remnant of the cartilage in this area may persist into adult life in some cases. The structures, called by Siebenmann, the "fissula ante fenestram," has been found by Anson and Bast to be present more commonly in adult females by nearly two to one. This may well be of significance since the incidence of otosclerosis in females is likewise two to one over the male.

Surgical treatment for Otosclerosis had its beginnings in the 1870's. Kessel³ in 1876 reported cases in which he had removed the tympanic membrane, malleus and incus. In 1888 Boucheron⁴ first reported on mobilization of the stapes. He and Miot⁵ claimed good results in properly selected cases. In an analysis of the status of the two procedures Politzer, in 1893, condemned ossiculectomy and favored stapes mobilization. In spite of this the stapes mobilization fell into disuse and removal of the ossicles became the popular procedure. Stapedectomy was proposed by Jack⁶ at about this time. During a discussion on the subject Passow⁷ suggested that perhaps better results could be obtained by allowing the stapes to remain and creating a new oval window in the labyrinthine wall. His subsequent experimentations showed that results were good, but quite temporary. At this point all attention was diverted from the stapes to the creation of an artificial fenestra. For the next 50 years efforts were directed toward perfecting a technique which would result in a permanent opening into some part of the labyrinth.

In 1899 Floderus⁸ expounded the basic principles of the surgical treatment known as fenestration, including the skin grafting over the artificial opening. It was not until 1916, however, that real impetus was provided. In that year Holmgren began his research on the problem. Because of his enthusiastic stimulus and his many contributions to the technique and equipment he has been called the "father of surgery for otosclerosis." One of the men who was attracted to the problem by the efforts of Holmgren⁹ was Sourdille. His work on the problem began in 1924. By 1937 he had perfected a three-stage procedure which produced 80% good results. Lempert¹⁰ described a practical one stage procedure for fenestrating the horizontal semicircular canal in 1938. In the next 12 years several prominent otologists devoted their efforts

to the development of numerous improvements and modifications and the fenestration as we have it today had completed its evolution.

Suddenly the entire picture changed. In 1953 Rosen¹¹ described the stapes mobilization operation for treatment of the condition known as Otosclerosis. Interest in the "new" procedure was stimulated and numerous investigators began to work on improvements. By 1955 Rosen¹² had reported 37% satisfactory results using the same criteria being used to evaluate the fenestration operation. In 1956 Goodhill¹³ reported 56% success with the use of the classical technique in conjunction with the microvibrator and curettage of the ankylosed footplate of the stapes. In 1957 Derlacki¹⁴, Shambaugh, and Harrison reported on a variety of techniques and the results obtained in each. Results with the original Rosen technique (basically that recommended by Politzer in 1893) were favorable in 24% of the cases. With the operating microscope and visualization of the footplate of the stapes the results were identical with those reported by Goodhill a few months before — 56% favorable results. Their latest series, performed under 16x magnification and including manipulation at and around the footplate yielded 64% favorable results. In this last series it is significant that 18% of cases produced results at least ten decibels better than could be predicted for the fenestration procedure by the standard criteria.

Thus we have seen the pendulum swing through its full range in roughly 50 years. The original procedure which attacked the site of the disease was abandoned in favor of a by-passing technique. After many years of intensive research the technique of circumventing the fixed stapes was finally perfected. Then, in a few years after its revival, the original procedure has gained an enormous following and promises to become the procedure of choice because of this intensive interest.

Stapes mobilization has many advantages over the fenestration. Not the least of these is the simplicity of the procedure which may be done under a local anesthetic in a relatively short time. Because it is not destructive it seldom results in any further loss of hearing if it is unsuccessful, and may be repeated if desired. The incision in the posterior canal wall heals readily, and in a few weeks it is impossible to ascertain that an operative procedure has been performed. The patient who has had a stapes mobilization need have no fear of swimming or getting moisture in the ear whereas the patient who has had a fenestration must protect the ears as he would a radical mastoid cavity and have it cleaned at regular intervals. Finally, if the stapes has been found to be immovable the otologist can still utilize the fenestration. At present even those who are most enthusiastic for the fenestration operation have adopted the policy of performing a stapes mobilization initially. This is done as a test for fixa-

Continued on Page 53

A Workable Plan For Setting Up A Disaster And Civil Defense Plan For Small Hospitals

CHARLES E. TOWNE, M.D.

GENERAL CONSIDERATIONS

- A. *The Overall Authority* and direction of the hospital disaster plan rests with the following individuals:
1. The Medical Director
 2. Administrator
 3. Director of nurses and supervisors

B. *Communications Procedures*

1. The switchboard operator will notify by "intercom" all departments. All personnel to report to their respective stations and stand by. Hospital personnel will use intercommunicating phone or messenger service *only*.
2. The hospital switchboard will be the main center of communications.
 - a. Immediately notify key hospital personnel.
 - b. Police Department (request radio car if needed).
 - c. Fire Department.
 - d. Civil Defense officials (if needed).
3. Administrator will assign personnel to telephones in front office to assist in notification of key hospital personnel which are on three lists to be kept at the switchboard.

List one includes:

- a. Medical Director
- b. Administrator
- c. Engineer (hospital)
- d. Director of Nurses
- e. Admitting Officer
- f. Housekeeper
- g. Dietitian
- h. Medical records
- i. Pharmacist

List two includes:

- a. President Women's Auxiliary
- b. Director Men's Volunteers
- c. Clergy

List three includes:

Physicians

Three starred to be called first. (Triage officers, pathologist, radiologist, anesthesiologist, heads of surgical and medical teams)
Two starred next, then one starred.

C. *Transportation And Discharge*

In order to expand hospital facilities, all wards and floors will advise the administrator of those patients who can be sent home. They will be discharged from an EXIT at a pre-determined point under supervision of a physician appointed by the medical director.

1. Traffic flow charts indicating entrances to be used by ambulances arriving with casualties and an exit for evacuation.
2. Resident patients to be relocated in designated wards, so far as possible, in order to establish floor space for definitive treatment in the areas assigned for burns, general surgery, orthopedics, shock and medical emergencies.
3. Local ambulances to be readied for standby service. Women's Auxiliary motor corps to furnish additional transportation using private automobiles and station wagons.
4. In the event of the need of massive evacuation from the hospital an alternate relocation center should be selected; i.e. schools, armories, or other hospitals.

ANNEX I

A. *Triage — Receiving and Sorting*

1. Location — accessible from ambulance entrance bringing casualties.
2. Tagging of patients by a record clerk.
3. Disaster kit and first aid supply, clearly marked and stored nearby, brought out. All material for tagging in this kit.
4. The Administrator or supervisor on duty will assign nurses, aides and clerks to Triage Center as needed.
5. The Triage officer will assign physicians under him to specific duties; i.e. First Aid team, head and dental injuries. Two physicians to act as Screening Team to determine the disposition of casualties. Casualties to be tagged with provisional diagnosis, destination and the treatment and/or drugs administered.
6. Stretchers and wheel chairs and rolling litters to be brought to this area to be utilized in the transferral of cases to areas designated by the Triage Officer.

- B. *First Aid Station* — Adjacent to Triage area
For treatment of ambulant minor injuries. A complete clinical record of treatment and disposition will be kept here.

C. *Shock Station*

1. Can be set up in a ward or examining room.
2. Complete and positive identification to be exercised.

D. *Burn Station*

1. Designate one room for emergency burn team. To be augmented by use of accident or other room, if the situation demands.
2. Clerk to be assigned to this area by Director of Men Volunteers.

E. *Surgical Station*

1. The operating suite shall be used for emergency surgery and major orthopedics.
2. Staff personnel will be assigned by Medical Director.

F. *Minor Orthopedic Area*

1. Minor orthopedics to be done in the accident room.
2. A physio-therapist, if available, should be assigned for duty here.

G. *Medical Station*

Designate one ward in the hospital for medical emergencies such as cardiac failure, cerebral hemorrhage, convulsions and others.

H. *Laboratory*

The pathologist will be responsible for:

1. Laboratory procedures
2. Pathology services
3. Blood Bank operation
4. Mortuary

I. *X-Ray*

1. The radiologist will prepare department for emergency service and alert all X-ray personnel.
2. Assign technician with portable machine to major orthopedic areas.

B. *Director Of Admissions*

1. Report number and location of empty beds to administrator.
2. Set up check-out desk at transfer EXIT.
3. Make assignment of rooms in cooperation with Triage Officer. Medical records staff will procure preliminary information: name, address, age, sex, religion, nearest of kin, description of injury and where accident happened, and send this information to the Hospital Information Center.

C. *Director Of Nursing*

1. Obtain a list of possible discharges and report to Administrator.
2. Evaluate staffing in all areas.
3. Assign personnel in the numbers available to Triage, to the shock area, to the burn area, to the minor orthopedic area, to the first aid and ambulatory area and to the O. R.

D. *Maintenance*

1. Check emergency generators, heat, light, and power.
2. Check reserve fuel.
3. Alert members of maintenance force.
4. If necessary, order water drawn for drinking purposes. Fill tubs, drums, tanks, etc., (in case of flood, hurricane or C.D. disaster).
5. Assign person to run elevator.

E. *Food Service*

1. Check reserve of canned goods and food supplies.
2. Plan for increase in number of meals to be served in patient areas and cafeteria.
3. Set up emergency food service to dispense coffee and sandwiches to volunteer workers, hospital personnel, etc.
4. Use paper plates to eliminate dishwashing.

F. *Housekeeping*

1. Increase linen supply to floors.
2. Assign personnel to storeroom to make up beds.
3. Promptly issue additional blankets and pillows to accident room and Triage.

G. *Medical Records*

1. Admitting Officer and Medical Records staff are responsible for maintaining a record of all casualties and recording all treatments.
2. A Medical Records clerk to be assigned to each treatment area. As patients enter, the clerk will complete the emergency tag tied to each casualty.
3. The tag goes with patients admitted to the hospital. The information on the tag is entered in the emergency book and the admitting

ANNEX II

Check list of all key personnel

A. *Administrator*

1. Activate the disaster plan.
2. Endeavor to fully determine nature and extent of the disaster.
3. Operate the Hospital Information Centers.
4. Assign an administrative assistant to act as liaison with Civil Defense.

office will make out history sheets from these records.

4. If the patient is treated and released, no entry will be made in the emergency book at that time. However, the emergency tag tied to the patient will be completely filled out and collected from the patient before he leaves the hospital and entered in the emergency book after the emergency is over.

ANNEX III

A. Hospital Information Center

1. Set up an office as Information Center under the direction of the administration.
2. At least two volunteers who are familiar with the hospital to act as messengers.

B. Public Information Center

A Public Information Center to be set up in an area outside the treatment area to handle the press, radio and relatives of casualties. The secretary of the administrator to be in charge, assisted by auxiliary, clergy and police.

C. Volunteers — Women's Auxiliary

1. Plan effective stagger system of calling volun-

teers since care of disaster casualties is often a matter of days or weeks.

2. Services to be provided by Women's Auxiliary:
 - a. Transportation
 - b. Nursing
 - c. Messenger
 - d. Food
 - e. Information

D. Volunteers — Men

1. Plan effective stagger system of calling volunteers to provide adequate volunteer service over an extended period.
2. Services to be provided by men volunteers include:
 - a. Traffic control
 - b. Orderlies
 - c. Litter bearers

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Disaster Plan for Eastern Maine General Hospital
Disaster Plan for Thayer Hospital

18 Common Street, Waterville

THE CASE OF THE STUBBORN STAPES — *Continued from Page 50*

tion of the stapes, as Rosen described in his earliest discussion.

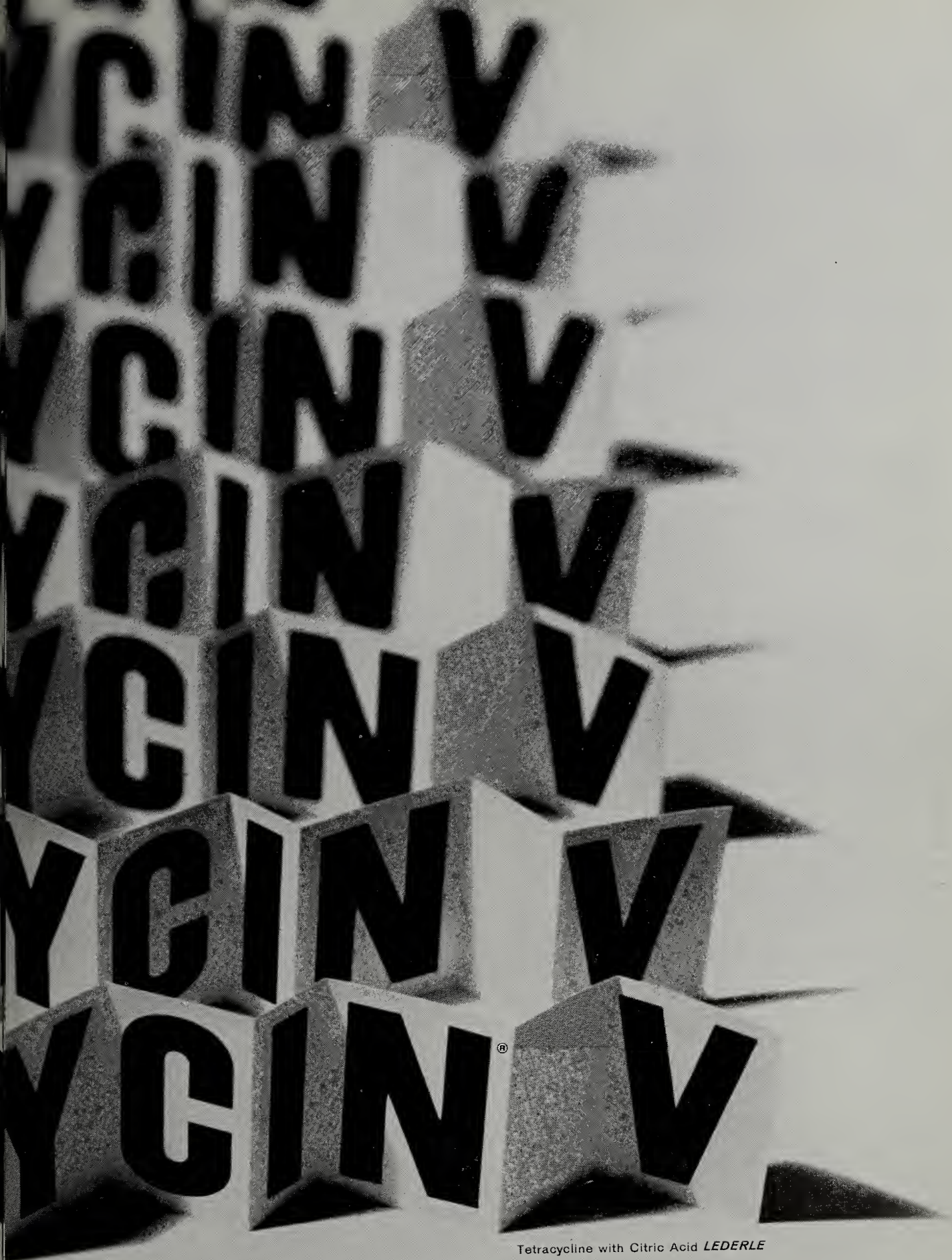
Possibly the most significant result of the recently renewed interest in stapedolysis is its effect upon the thinking of the current generation of otologists. The attention of the majority of otologic surgeons has been directed away from the mastoid air cells and turned to the tympanic cavity. It is to be anticipated that in the near future techniques will be devised for treating more and more conditions transtympanically and therefore less destructively. This will result in a policy of preserving function by restoring normal structure and physiology rather than destroying "what God hath wrought" and doing the job over to suit man's idea of how it ought to be.

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Our "Oath"

KENNETH W. SEWELL, M.D.*

This fall one of my sons was preparing some school work on ancient Greece. While working, he said, "Dad, did you take the Oath of Hippocrates?" I replied, "Yes." Then he asked, "Do all doctors have to take the Hippocratic Oath?" When I answered, "I believe so," more questions followed and we both looked up and read the Oath. This caused me to reflect a bit. I reread the Oath again. Then I thought it would be a good thing if all of us reread it once in awhile.

The ancient Oath of Asklepiades of Cos is known to have been written before the time of Hippocrates. In *The Iliad*, Aesculapius is a Thessaliad chief who received from the Centaur Chiron instructions in the use of drugs. His two sons were warriors and army surgeons. Aesculapius was recognized as the god of medicine, the son of Apollo. Hippocrates was a member of the Asklepiades of Cos. Their oath indicates the source of his professional ethics.¹

The Oath is as follows: "I swear by Apollo the physician, and Aesculapius and Hygeia and Panacea and all the gods and goddesses that, according to my ability and judgment, I will keep this Oath and this stipulation, to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required, to look upon his offspring in the same light as my own brothers, and to teach them this Art, if they should wish to learn it, without fee or stipulation; and that by precept, discourse, and every other mode of instruction. I will impart a knowledge of the Art to my own sons, and those of my teachers and disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, nor suggest any such counsel, and in like manner, I will not give a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my Art. I will not cut persons laboring under the stone and will leave this to be done by men who are practitioners of this work. Into whatever houses I enter I will go

into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further, from the seduction of females or males, of freeman and slaves. Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath inviolate, may it be granted to me to enjoy life and the practice of the Art, respected by all men in all times. But should I trespass and violate this oath, may the reverse be the lot."

Why reread this Oath? I believe we can think of many reasons for refreshing ourselves concerning some of its thoughts. We know that, in general, our patients feel that we are more dedicated in our practice because they believe the Oath is an inherent part of our medical philosophy. Whether or not we are familiar with the Oath, we like to have people believe we live by it, and we take pride in wearing its cloak. We may complain about what other physicians say or do. We may complain about medical liability insurance rates going higher and higher, or about medical law suits, or about the work of our state or county medical societies or committees. If each of us follows the meaning of the Oath and of medical ethics in general as we know we are supposed to follow them, we would have less to complain about. If a patient seen for the first time has a ragged abdominal scar, recurrent varicose veins or hemorrhoids, tonsillar tabs, a recurrent cystocele or needs a change in glasses lens, there is no place for the too often heard remark, "Who OPERATED ON you?" Such remarks may feed one's own ego, but hurt the medical profession in general and eventually the person who made the remark. Occasionally, such outbursts lead to the threat of unjustified legal suits. If we have complaints, let us give helpful criticism, go to the proper physicians or committees and help the committees of our society.

Let us think more often about our medical responsibilities. Reread the Oath occasionally and work together. If we do, there will be no need of outside intervention or government medicine.

"While I continue to keep this Oath inviolate, may it be granted to me to enjoy life and the practice of the Art, respected by all men in all times. But should I trespass and violate this Oath may the reverse be the lot." And I will have none to blame but myself.

*Thayer Hospital, Waterville, Maine

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Across The Desk

Senate Orders Year's Study Of Problems Of The Aged

A new subcommittee of Senate Labor and Public Welfare Committee has come into being and it plans a year-long inquiry into matters involving the country's aged population. In a surprise move, the full committee voted to set up the subcommittee on Problems of the Aged and Aging, in addition to such subcommittees as health and veterans affairs. Heading the study group is Senator Pat McNamara (D., Mich.). Other Democratic members are Senators John Kennedy of Massachusetts, Joseph Clark of Pennsylvania, Jennings Randolph of West Virginia. Republican members are Senators Everett Dirksen of Illinois, who is Senate Minority Leader, and Barry Goldwater of Arizona.

The subcommittee will range the whole field of aged problems: health, housing, employment opportunities, recreation. Senator McNamara said he considered meeting the problems of senior citizens "one of the greatest sociological challenges facing America today."

Extensive hearings are planned for Washington and selected points around the U. S. First step will be the setting up of a panel of "recognized authorities in the field" to assist the subcommittee in laying down guidelines for the study. Then would come hearings at which federal agencies concerned would be heard, followed by public and private organizations. Said Senator McNamara: "Recommendations for specific legislation will come at a later date." Senator Lister Hill (D., Ala.), chairman of the full committee, heads the health subcommittee.

Milk Radioactivity Increases, But Not At Dangerous Rate

The Public Health Service, announcing an increase in the radioactivity level in milk, at the same time reassured the public that the amount still is "well below" the danger point. Samples were taken in September, but complicated testing delayed release of the results until now. PHS also said the increases "generally were within the range of recent month-to-month fluctuations in radiation levels among the different sampling stations."

Measurements also are taken for four other specific radioactive elements in milk, but the levels, although variable, have consistently been well below that for strontium-90.

Report Given On Financial Status Of Social Security Program

An advisory group drawn from industry, labor and higher education has completed a year-long study of social security financing, as required by a 1956 edict of Congress. The council's verdict: The method of financing OASDI is sound and based on the best estimates available, the contribution schedule now in the law makes adequate provision for meeting both short and long-range costs.

Social security taxes go into two trust funds, one for old-age and survivors insurance and the other for disability insurance. Effective this January 1, the maximum earnings base was increased from \$4,200 to \$4,800.

The council did not propose any further change in the base but observed that "further consideration will be given to this maximum after the effect of the \$4,800 figure has been evaluated." Bills in the last Congress and similar ones being introduced in the new Congress call for as much as \$10,000 in earning base.

Some council conclusions: (1) no fundamental changes in the methods of financing the social security system are required or desirable, (2) the present policy of investing the trust funds in U. S. government obligations should be continued, (3) in order to keep the system in sound financial condition, it was suggested that periodic scrutiny of all factors which in any way effect the financing of the program be started.

Army Develops Emergency "Mass Casualty Packet"

The Army has just developed, and has on display in Washington, a new emergency medical packet for use in treating mass casualties, useful in civilian disasters as well as military. It will be used by all three services. The packet has 23 items and medical material adequate to care for 100 casualties for 72 hours. The container is light and inexpensive, easily identified by color or symbol, and may be sealed so as to give visible evidence if opened. It is easily transported by individuals.

Miscellany

Public Health Service Foreign Quarantine stations have been advised to enforce all smallpox regulations on arrivals from Western Europe. Two confirmed and one unconfirmed cases are reported from Heidelberg, all physicians. The original case had been in India and was met by two colleagues on arrival in Germany.

Congress To Call Shots On Health Legislation

It is already clear that Congress, not the Administration, will be taking initiative on health measures this year. In his State of the Union message Friday, the President deplored disease and spoke vaguely of greater spending — next year — for health programs. But in the meantime, House leaders were introducing and pledging aggressive support of a bill conferring liberal health insurance benefits on federal employees.

Holdover Bills Filed

On the first day of the new session, some 2,000 bills and resolutions were introduced by members of the House. Most of these, of course, were dated-up measures which had failed to pass last year. Among them were scores of national health bills: Income tax inducements for gifts to nonprofit voluntary health insurance plans . . . nursing scholarships . . . veterans medical care benefits . . . subsidies for construction of treatment cen-

ters in rural areas by Hon. Frank Coffin (D., Maine).

Rep. Eugene J. Keogh (D., N. Y.) again filed his bill authorizing tax-deferred retirement plan set-asides for doctors, lawyers and other self-employed. It bears the same number — H.R. 10. New Republican co-sponsor is Rep. Richard M. Simpson (Pa.), ranking minority member of Ways and Means Committee.

Two high-ranking Democrats and one Republican on Post Office and Civil Service Committee are co-sponsoring a bill to provide basic and major medical coverage for government workers and families, with United States bearing more than two-thirds of the cost. The bill was drawn up by the Government Employees Council, an AFL-CIO affiliate.

Drs. In Ready Reserve Told To Be Unessential

The National Advisory Committee to Selective Service is putting medical schools and hospitals on notice: They had better not cry "Don't touch, he's essential" if one of the armed forces calls up a doctor who is a member of its Ready Reserve. "If any such individuals are now in essential positions, either on faculty or staff, they should request transfer from the Ready Reserve to the Standby Reserve," says a committee memorandum. "Otherwise the Ready Reserve is not a Ready Reserve."

The advisory group's notice assumes this point because it is probable the armed services will be obliged to call upon the Selective Service to supply several hundred physicians in a year or so (assuming Congress extends the draft law).

20-Year Study Urged On Radiation's Ill Effects

Dr. Shields Warren, noted Boston pathologist, last week set in motion what he hopes will be a successful campaign to launch a demographic study of relationship between radiation and neoplastic diseases. He is chairman of National Research Council's Committee on Pathologic Effects of Atomic Radiation. In that capacity, he discussed a newly published commentary on the report issued last August by the United Nations Scientific Committee on Effects of Atomic Radiation.

The Warren committee's commentary takes exception to several conclusions of the UN group's report. Foremost is the latter's contention that, in the induction of malignancies by small doses of radiation, linearity and threshold effects as applied to behavior of somatic cells have equal likelihood of validity. His committee can not accept this hypothesis, said Dr. Warren, adding that long-term, large scale population studies are needed to help solve this complex problem.

Accordingly, he stated federal agencies should provide all or most of the funds needed — between \$15 and \$30 million — to support a 20-year survey. He proposes study and followup of 2 million persons, divided equally between geographical areas of low and high background radiation. The former might be a metro-

politan center in California, the latter a city and suburbs in the Rocky Mountain region, said Dr. Warren. Note: A special project of this kind conceivably could be included in the National Health Survey conducted by the U. S. Public Health Service.

Flu Vaccination Urged On Cardiacs by PHS-AHA

Surgeon General Leroy E. Burney of the Public Health Service and Dr. Francis L. Chamberlain, president of American Heart Association, issued a joint statement counseling persons with diseases of heart and blood vessels to see their doctors about influenza vaccination. The cardiac is an especially high risk when pulmonary congestion occurs, the statement said.

"Studies with influenzal vaccine have clearly shown that its use significantly reduces the incidence and probably the severity of influenzal infection . . . Furthermore, use of the vaccine is contraindicated only in those patients who are allergic to the components of the vaccine. The type of local and systemic reactions to vaccine have not been such as to constitute any significant hazard to patients with cardiac diseases."

Data On Acute Illnesses And Injuries

During the year which ended June 30, 1958, the American population suffered about 438 million acute illnesses and injuries requiring medical attention or causing time loss from work or school, or both. A National Health Survey report has just been published by the Public Health Service.

Acute disabilities were classified as follows: Infectious and parasitic diseases; upper respiratory; other respiratory; digestive system; fractures, dislocations, sprains and strains; open wounds and lacerations; contusions and superficial injuries; other current injuries; all other acute conditions.

Respiratory conditions accounted for 65 per cent of all acute illnesses. They produced 1.172 billion days of restricted activity, or an average of 7 days a person.

1960 Budget Highlights; HEW Department Figures Given

The House will launch hearings (in closed session) soon on the Department of Health Education and Welfare's proposed budget for the 1959-60 fiscal year. It provides greater funds for vocational rehabilitation, communicable disease control programs and sanitary engineering activities. Sharp cuts are imposed for Hill-Burton hospital construction grants and similar financial aid in expansion and improvement of medical research facilities. For medical research grants in aid, maternal and child health and grants to states for general public health activities the allocations are virtually the same as they were in the current year.

This year, the Public Health Service is spending \$2

million on public health traineeships and nearly \$6 million on nursing traineeships, both at graduate level. The budget makes no provision for continuation, explaining that authority to conduct these programs, begun in 1956, will expire in June. While it is the Administration's intention to request a statutory extension, the money requisition was deferred presumably so as to help hold down the size of the budget sent to Capitol Hill.

Senator Hill, as chairman of the subcommittee handling HEW's funds bill, will sponsor legislation extending for *five* more years the public health and nursing training programs. Too, he'll resist the Hill-Burton cut — down to \$101 million from current year's \$186 million — and fight for \$30 million in research construction grants, compared with the \$20 million recommended by the White House.

For medical evaluation of new drugs, \$626,000 is included in Food and Drug Administration's budget. This division's workload will include inspection of some 21,500 establishments and collection of 43,000 samples for scrutiny.

Food Supplements Said To Be Unnecessary During Pregnancy

Expectant mothers generally do not have to resort to food supplements to obtain all the vitamins, minerals and other nutrients needed during pregnancy.

These nutritional essentials are readily available from normal food sources, three Vanderbilt University researchers said.

Their conclusions are based on a study of 2,388 pregnant women and are reported in the December 20 Journal of the American Medical Association.

As a result of their study, William J. McGanity, M.D., Edwin B. Bridgforth, A.B., and William J. Darby, M.D., all of Nashville, Tennessee, questioned the wide use of food supplements in the diets of expectant mothers.

They said that their study indicates no significant difference in the incidence of maternal or fetal abnormalities in women receiving supplements and those on a standard diet. The only exception was among women with iron deficiency anemia, the authors said. These women generally need supplementary iron.

They concluded that if a doctor feels his patient is not obtaining the necessary amounts of minerals or vitamins he should recommend dietary corrections before resorting to supplements.

Such supplementation, the authors said, should be used only to bring the patient up to accepted nutritional levels.

They further noted that their study does not provide evidence to indicate that dietary intakes greater than the allowances of the Food and Nutrition Board of the National Research Council, Washington, will bestow protective benefits during pregnancy.

"A diet that will provide the recommended levels

of nutrients is readily attainable from food sources in all sections of the country without the need of supplementation," they concluded.

One-Sixth Of Population Looks To U. S. For Medical Care

Statistics collected by the U. S. Budget Bureau reveal that Washington has potential responsibility to furnish all or part of medical services for more than 31 million — about 17 per cent of the country's entire population. This takes in 22.7 million veterans, 3.3 million military dependents, nearly 3 million servicemen and smaller numbers of Indians, merchant seamen, federal personnel, narcotics addicts, prisoners, Hansen's disease sufferers and others.

M.D. International

One of television's most acclaimed documentaries — "M.D. International," the inspiring story of the work of American doctors who serve in the far corners of the world — will be re-broadcast in color from 5 to 6 p.m. (EST) Sunday, February 22, on the full NBC network.

Japanese Cancer Cure Claims Not Substantiated Here

The Cancer Chemotherapy National Service Center reported today that Mitomycin C, an antibiotic reported as giving promising results in cancer treatment in Japan, has frequently produced major toxic reactions but seldom objective improvement in clinical trials in the United States.

The antibiotic has been under pilot clinical evaluation in this country as an anti-tumor agent in a substantial variety of tumors. In view of the effects observed in three current studies, it has not so far replaced the standard chemotherapeutic agents in any form of cancer, the Chemotherapy Center's announcement said. Full reports on the clinical trials will appear later in the scientific literature. Meanwhile, studies of the drug are being continued.

Japanese experience in treating human cancer with Mitomycin C was reported at a Symposium on Antibiotics in Washington, D. C. October 16, 1958. A limited quantity for clinical trials in this country was produced by Bristol Laboratories for the Cancer Chemotherapy National Service Center.

M.D.'s (& Plumbers) Riled By Revenuers' Tax Check

The current issue of a tabloid newspaper circulated free among physicians says this city is in the midst of "the most intensive door-to-door hunt for medical tax evaders in the Capital's history." But the fact is simply

that a routine canvass by the Baltimore district office of Internal Revenue Service is in progress. It is covering architects, liquor dealers and other self-employed, along with doctors.

"Yes, we've heard about complaints from physicians," said a spokesman of IRS, "but there have been as many complaints by plumbers." He explained that an agent will cover all businesses or professional offices in an assigned block. If a large medical building is in that block, a good many physicians and dentists are going to be canvassed.

Heart-Lung Machine Used In Cancer Treatment

A new treatment for at least one type of cancer, involving the use of a heart-lung machine and a chemical, was described by three Tulane University physicians.

Writing in the January 24 Journal of the American Medical Association, Drs. Oscar Creech, Jr., Robert F. Ryan and Edward T. Kremenz, New Orleans, said they have used the technique to treat 41 cases of malignant cancer, including eight of melanoma.

Melanoma is a malignant and rapidly fatal tumor resulting from excessive growth of the pigment-containing cells in the skin. Often beginning as a mole which undergoes rapid change, the cancer spreads rapidly to other parts of the body through the blood and lymph systems. This characteristic makes it difficult to treat.

The cases of melanoma were treated with a heart-lung machine and phenylalanine mustard, an analogue of nitrogen mustard, a fairly common cancer treatment drug.

One of the problems of both phenylalanine mustard and nitrogen mustard is their severe side effects, especially the depression of blood cell production by the bone marrow.

These side effects can be avoided through the use of a heart-lung machine, the doctors said. They explained how they used it in the treatment of melanoma of the lower extremities.

The normal blood flow to the leg is shut off from the rest of the body, and a separate circulatory system is set up for the leg by attaching the heart-lung machine to an artery and a vein. (The machines generally used in heart surgery maintain circulation and oxygenation.) After the machine is operating, phenylalanine mustard is injected into the artery and allowed to circulate through the leg.

The isolation of the tumor-bearing area prevents the spread of the chemical throughout the body, thus reducing the chances of side effects. In addition, the chemical is concentrated in the affected area, thereby increasing its effect on the tumor.

The doctors said they used this "isolation-perfusion technique" in addition to surgical removal of the primary or recurrent melanoma lesions.

(In early January, three Tennessee physicians were reported to have used a lung machine and nitrogen mus-

tard to treat with apparent success three women with pelvic cancer. They used neither surgery nor radiation, according to a newspaper report.)

Among the patients, six were treated for extensive (cutaneous) spread of the melanomas, the primary lesion having been removed previously. The other two had the primary lesions removed in conjunction with the isolation-perfusion technique. All but one were free of disease outside the involved extremity.

The first patient to be treated with the technique has been followed for more than a year, the doctors said. During the year, almost all of his cutaneous lesions disappeared, and only six of an original 175 diseased areas remained. They have shown no evidence of growth and apparently the disease is controlled, the authors said.

(A case of cancer is generally not considered to be cured until the patient has been free of the disease for at least five years.)

One patient, a 72-year-old man, died. He had metastatic (spreading) melanoma covering almost the entire surface of the right leg which spread to the lymph nodes in the region of the small intestine. The doctors noted that isolation of the perfused area was not complete, and severe depression of bone marrow occurred within a few days.

They said evidence, derived largely from the first patient, suggests that phenylalanine mustard, in addition to destroying cancerous cells directly, also initiates certain changes which make the cells more susceptible to resistance factors in the body. This assumption is based primarily, they said, on the observation that regressive changes in tumors continue long after the drug has become inactive and after the period of acute cell destruction resulting from the chemical agent has passed.

Mechanical Brain Use Growing In Medical Sciences

Electronic computers have been used in industry and in warfare, but now they are moving into the biological and medical sciences.

Some of the dozens of uses they have in science were described in an article in the January 17 Journal of the American Medical Association.

Harry Weinrauch, M.D. and Albert W. Hetherington, Ph.D. of the U. S. Air Force's Air Research and Development Command said the mechanical brains have an almost limitless horizon for use in the medical and biological sciences.

In fact, it has even been suggested that a modified residency program for training in computer techniques be set up for qualified physicians.

The National Academy of Sciences and the National Research Council, in cooperation with the Air Force

and the National Institutes of Health, have appointed a group to consider the application of computers to medicine and biology. The group will analyze the types of medical and biological problems in which computers have been employed and will recommend the types of situations in which they could profitably be used.

Computers have already been used in the lengthy statistical calculations required during mass standardizations of drugs and in the correlation of vast amounts of information in particular areas of public health. They were used in the evaluation of the effectiveness of the Salk vaccine, and in the studies linking tobacco to cancer and tobacco to cardiovascular disease.

A computer has already been devised which analyzes electroencephalograms and others could be used in the analysis of similar bioelectrical phenomena such as the electrocardiogram.

Computers can be built that simulate certain systems of the body. They can be used to study the activities and the possibilities of interrelations within these systems. These, according to the authors, offer great possibilities as research tools in understanding the functioning of the body, particularly the nervous system.

Specialized computers can be designed for specific tasks. For instance, one computer has been built which is incorporated in mechanical breathing devices. The calculator measures the voluntary breathing activity of the patient and correspondingly cuts down the action of the mechanical device.

Another category of computer application stems from its ability to store and recall quickly vast quantities of information. The authors suggested that computers be used to store the tremendous amount of data recorded on hospital charts and in medical journals. The "sheer mass of this material is so staggering that it defies efforts at retrieval." At present, the problem of building a machine big enough to store such material has not been solved, but it will in the future, the authors think.

Regional Medico-Legal Symposium

On March 20 and 21, 1959 in Washington, D. C., doctors and lawyers will get together for an interesting session. Some of the subjects that will be included are: medical and legal problems involved in narcotic addiction, traumatic neurosis, the approach of medicine and the law to contingent fees, *res ipsa loquitur* in professional liability cases, impartial medical testimony and the classic method of examining an expert medical witness.

The growing interest in medico-legal problems in Maine seems to indicate that a large delegation from Maine will be present. The meeting is open to all interested physicians and lawyers.

Report Of The Delegate To The A.M.A. House Of Delegates

Clinical Session, December 1958

The keynote of this meeting of the A.M.A. House of Delegates was medical care for our aging population. President Gunderson presented the problem very well by the following remarks.

"We must fight hard to preserve basic principles and traditions which are essential to good medical care. We must also be alert and adaptable to the changing time in which we live but not by appeasement or abandonment of principles. We should fight not by simply quoting Washington, Jefferson and the rest of our founding fathers, but rather to translate their vision into a modern, workable reality in medicine, medical economics, and all other aspects of American life.

"One of the most compelling problems is health care of the aged. Physicians with others have helped create the problem, now we must accept our full share of the responsibility in solving it. Many habitually advocate government solutions to health problems on a basis of political expediency, but they ignore or minimize the great dangers inherent in such means. As a result, medicine is frequently forced to oppose legislation which has a worthy goal but offers pitfalls for medicine and the public.

"Medicine recognizes and accepts its responsibility in the field of aging and is conducting or cooperating in a variety of activities to improve the health care of the aged. These programs must be accelerated, given active leadership and implementation on the state and local level. The results to the moment are 1. 'Medicine's Blueprint for The New Era of Aging,' 2. 'Planning Conference in the Field of Aging,' (These two pamphlets should be read and action taken immediately by all component societies.) and 3. 'Joint Council to Improve the Health Care of the Aged.'"

To give further impetus toward the solution of the problem of Health Care for the Aged, the House of Delegates approved the following resolutions.

1. Urged further study and means of providing extended Voluntary Prepayment Coverage beyond the age of 65 years. (65% of Blue Shield Plans now impose no age limit on initial enrollment and private insurance companies are beginning to increase their age limits beyond the age of 65.)

2. Commended the "planning Conference" and the "Committee on Aging" for its work.

3. Approved the following report of the Council on Medical Service. "For persons over 65 years of age with reduced incomes and very modest resources, it is necessary immediately to develop further voluntary health insurance or prepayment plans in a way that would be acceptable to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens.

"Therefore, the Council on Medical Service recommends that, The A.M.A., the constituent and component medical societies, as well as physicians everywhere expedite the development of an effective Voluntary Health Insurance or Prepayment program for the group over 65 with modest resources or low family income, and that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate. A copy of this resolve to be

sent to each component society, Blue Shield Plan and private insurance programs."

The House of Delegates considered many other problems but the following should be of special interest to the Society.

ETHICS

Report of Judicial Council. If medical societies fail to accept and discharge their obligations in matters of ethics, others will assume these obligations by default. Ethics and discipline committees of each county society were urged to "adopt critical attitudes toward their programs to uphold the honor and dignity of the profession of medicine."

DUES EXEMPTIONS FOR RESIDENTS

Dues exempt status extended to residents returning for special training five years and more after graduation.

GOVERNMENT PHYSICIANS

Urge State Societies to provide a type of membership for members of Armed Forces, Public Health Services, and V.A. physicians which would enable them to become active members of constituent societies.

ADMINISTRATIVE

Approved expenditures of funds to employ and retain A.M.A. administrative personnel of the highest caliber to insure a staff of competent and loyal people.

V.A. HOSPITALIZATION

Recommended that our V.A. committee to assist in guaranteeing V.A. Hospital admissions only for:

1. Service Connected cases.
2. Those cases where an illness constitutes an economic disaster which would justify care by a V. A. hospital.

PUBLIC ASSISTANCE AND BLUE SHIELD

Approved "Suggested Guides For Medical Society Sponsored Voluntary Prepayment Medical Benefit Plans." Council recommends that each state society give serious consideration to the use of a "voluntary agency such as Blue Shield" for the administration of "any funds provided under the Public Assistance provision of the Social Security Act for medical care of the indigent."

CONGRESS OF PREPAID HEALTH INSURANCE

Authorized the C.M.S. to sponsor a Congress on Prepaid Health Insurance to which all prepaid medical and hospital care plans shall be invited to send representatives to collaborate in formulating plans for offering sound and constantly improving voluntary health insurance to the citizens of our nation.

GENERAL LEGISLATION

Noted in the report of the committee on Legislation that of 15 bills of a medical nature enacted into law by the 85th Congress, only one was opposed by the A.M.A. and in its statements to Congress the A.M.A. was supporting the legislation, a principle involved on 19 occasions and opposed on only eight occasions.

RELATIVE VALUE FORMAT FOR BLUE SHIELD

Approved the use of the "California Relative Value Study" as a material format for Medical Society sponsored plans without unit or dollar values. These are to be adjusted by each society.

A.M.A. OBJECTIVES

Committee A.M.A. objectives and Basic Programs after careful review of 1200 returned questionnaires recommended that:

1. The objective of the A.M.A. be expanded to include understanding of the socio-economic condition which will facilitate better public health as well as the promotion of the Science and the Art of medicine.
2. A.M.A. coordinate scientific activities of other National Medical organizations with those of the A.M.A.
3. Open the J.A.M.A. to a free and open discussion of socio-economic problems applicable to medicine.

MEDICAL CARE PLANS

(RE: FREE CHOICE)

Postponed action on medical care plans but asked each society to submit in writing their attitude on:

1. Free choice of physician: Is this concept to be considered a fundamental principle, incontrovertible, unalterable and essential to good medical care without qualifications?
2. What attitude will the State Society have toward physicians practicing in those systems of medical care which restrict free choice of physician?

OSTEOPATHY

Referred to the Judicial Council to further investigate the status of various state laws and previous House of Delegate action regarding Osteopathy.

MEDICAL EDUCATION

Urged the increased expansion of Medical Educational facilities to train an increasing number of physicians.

UNITED FUND AND HEALTH AGENCIES

Declined to take sides on Voluntary Health Agency inclusion in United Fund Drives but requested Board of Trustees to have top level conference with a view toward resolving misinterpretation and difficulties in this area.

"BUYERS' GUIDE"

Approved a plan to develop a "Buyers' Guide" to assist the public in its purchase of health insurance.

CIVIL DEFENSE

Approved the use of reserve medical units to supplement Civil Defense operation.

MEDICARE

Urged the A.M.A. to encourage the reestablishment of service under the free choice principle to accomplish the original intent of the "Medicare" act.

This is the first meeting that we have had an alternate delegate attend the A.M.A. House of Delegate session. Dr. Asa Adams of Orono, accompanied me to Minneapolis. It is of great value to me as well as to our society to have an additional member representing Maine. The Society is to benefit particularly by having another spokesman to help explain to each of you the actions and reasons why of our parent organization.

The A.M.A., its Board of Trustees, Councils, and committees are doing well a terrific amount of work. It should get better. It needs your more active support and action at the county level on recommendations of The House of Delegates as outlined above and in the A.M.A. News Bulletins.

PHILIP P. THOMPSON, JR., M. D.

Necrology

HERBERT R. KOBES, M.D.

1904-1959

Herbert R. Kobes, M.D., who established the first Program for Crippled Children in Maine in 1936 and served as its administrator until 1945, died January 10, 1959, in Springfield, Illinois. At the time of his death, he was Director of the Division of Services for Crippled Children of the University of Illinois.

Dr. Kobes was a native of New Bedford, Massachusetts. He received his M.D. degree from Harvard Medical School in 1930 and his master's degree in public health from Johns Hopkins School of Public Health in 1941. He was rotating intern and resident in pediatrics and contagious diseases at City Hospital in Cleveland, Ohio, and intern in pediatrics at Babies and Children's Hospital in the same city during the period from 1930 to 1934.

Soon after the passage of the Social Security Act in 1935, Dr. Kobes came to Maine to inaugurate the State Program for

Crippled Children which is now a function of the Division of Maternal and Child Health in the State Department of Health and Welfare. The present Director of the Division, Ella Langer, M.D., worked with Dr. Kobes for one year before being appointed Director when he left Maine to go to Illinois.

Dr. Kobes was a diplomate of the American Board of Preventive Medicine and also of the American Board of Pediatrics; a member of the American Medical Association; A Fellow of the American Public Health Association and a Fellow of the American Academy of Pediatrics.

Dr. Kobes' professional associates in the Maine Department of Health and Welfare and throughout the State and many personal friends mourn the passing of an efficient administrator; an outstanding pioneer in his chosen field of medicine and a man of high integrity and kindly and friendly warmth in all relationships.



DEAN H. FISHER, M.D.
COMMISSIONER

State of Maine

Department of Health and Welfare

First International Medical Conference On Mental Retardation

The week of July 27-31 inclusive, the State of Maine will play host to the First International Medical Conference on Mental Retardation. The Conference will be held at The Eastland, Portland, Maine and is open to all physicians throughout the United States, Canada, and other countries of the world. Its primary objective is not to answer all questions on the problems of mental retardation but rather to construct those problems which must be attacked scientifically. It will follow immediately after the International Pediatric Congress at Montreal, Canada. The Conference is being organized by the Maine Chapter of the American Academy of Pediatrics, Pineland Hospital and Training Center, Pownal, Maine, and the Division of Maternal and Child Health, State Department of Health and Welfare. The Maine Medical Association is one of the many sponsors of the endeavor.

Peter W. Bowman, M.D., Pownal, Maine is serving as general chairman of the Conference. Edmund N. Ervin, M.D., Waterville, is chairman of the Liaison Committee. He is assisted by C. E. Benda, M.D., Arlington, Massachusetts; George Stevenson, M.D., New York, New York; J. Rees, M.D., London, England; P. Plum, M.D., Copenhagen, Denmark; G. Frontali, M.D., Rome, Italy; Richard Maseland, M.D., Bethesda, Maryland. Ella Langer, M.D., Augusta, Maine is chairman of arrangements and finance.

The Program Committee, of which Hans V. Mautner, M.D., Pownal, Maine is chairman, comprises Malcolm J. Farrell, M.D., Boston, Massachusetts; Howard V. Bair, M.D., Parsons, Kansas, and Ella Langer, M.D., Augusta, Maine.

Following is the preliminary program of the Conference:

MONDAY, JULY 27, 1959

(Chairman to be announced)

"Brain Anatomy and Mental Retardation"

Paul I. Yakovlev, M.D.
Professor of Neuropathology
Harvard University
Boston, Massachusetts

"The Autonomic Nervous System and Brain Activity"

E. Gellhorn, M.D.
Professor of Neurophysiology
University of Minnesota
Minneapolis, Minnesota

"Enzymology and Brain Activity"

D. Y. Y. Hsia, M.D.
Professor of Pediatric Research
Northwestern University
Chicago, Illinois

"The Reticular System"

W. F. Ingram, M.D.
University of Iowa
Iowa City, Iowa

Discussions and Additions

TUESDAY, JULY 28, 1959

Chairman: P. Plum, M.D., Professor of Pediatrics
University of Copenhagen, Copenhagen, Denmark

"Protein Metabolism and Phenylketonuria"

R. S. Paine, M.D.
Children's Medical Center
Harvard University
Boston, Massachusetts

"Lipoid and Carbohydrate Metabolism"

P. Diezel, M.D.
Priv. Doz. of Pathology
University of Heidelberg
Heidelberg, Germany

"Metabolic Problems of Iron and Copper In Relationship to Brain Diseases"

J. N. Cumings, M.D.
Professor of Chem. Pathol.
University of London
London, England

"Treatment of Phenylketonuria"

M. Bickel, M.D.
Priv. Doz. of Pediatrics
University of Marburg
Marburg, Germany

Continued on page 66



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SEARLE

*A Symposium on the Pharmacologic Effects of Dartal on the Liver, Chicago, Searle Research Laboratories, Feb. 7, 1958.

FIRST INTERNATIONAL MEDICAL CONFERENCE . . . *Continued from page 64*

WEDNESDAY, JULY 29, 1959

Chairman: G. Frontali, M.D., Professor of Pediatrics
University of Roma
Rome, Italy

"Experimental Production of Congenital Malformations of the
Central Nervous System"

J. Warkany, M.D.
Professor of Pediatrics Research
University of Cincinnati
Cincinnati, Ohio

"Birth Injury"

P. Schwartz, M.D.
Professor of Pathol. Emer. of Frankfurt
Warren State School
Warren, Pennsylvania

"Infections and Mental Retardation"

H. Asperger, M.D.
Professor of Pediatrics
University of Innsbruck
Innsbruck, Austria

"Asphyxia of the Newborn"

L. Stanley James, M.D.
Presbyterian Hospital
New York, New York

"Infections Before Birth"

M. Schachter, M.D.
Marseille, France

Discussions and Additions.

THURSDAY, JULY 30, 1959

Chairman: E. Rominger, M.D., Professor of Pediatrics, Emeritus
Freiburg, Germany

"Our Present Knowledge of the Pathology and Physiology of
Mongolism"

C. E. Benda, M.D.
Walter Fernald School
Waverly, Massachusetts

"Erythroblastosis"

W. W. Zuelzer, M.D.
Professor of Pediatric Research
University of Detroit
Detroit, Michigan

"Internal Therapy of Mental Retardation"

K. Kundratitz, M.D.
Professor of Pediatrics

University of Vienna
Vienna, Austria

"Surgical Treatment in Mental Retardation"
(to be announced)

"Kernicterus"

H. S. Baar, M.D.
Pathologist
Pineland Hospital and Training Center
Pownal, Maine

Discussions and Additions.

FRIDAY, JULY 31, 1959

Chairman (to be announced)

"Diagnostic and Therapeutic Aspects of Childhood
Schizophrenia"

L. Bender, M.D.
State of New York
Dept. of Mental Hygiene
New York, New York

"Mental Retardation As Part of the Training Program in Child
Psychiatry"

G. E. Gardner, M.D.
Director of the Judge
Baker Guidance Center
Boston, Massachusetts

"Differential Diagnosis of Autism, Childhood Schizophrenia
and Heller's Disease"

C. E. Benda, M.D.
Walter Fernald School
Waverly, Massachusetts

"Behavior Problems and Brain Damage"

H. Asperger, M.D.
Professor of Pediatrics
University of Innsbruck
Innsbruck, Austria

Tentative programs for the Conference, including registration and reservation forms, are receiving wide distribution throughout this country and abroad. Persons wishing to receive such program, or to make any inquiry about the forthcoming Conference, are requested to write the Conference Secretary, c/o Division of Maternal and Child Health, State House, Augusta, Maine or telephone Augusta, Mayfair 3-4511, Ext. 605.

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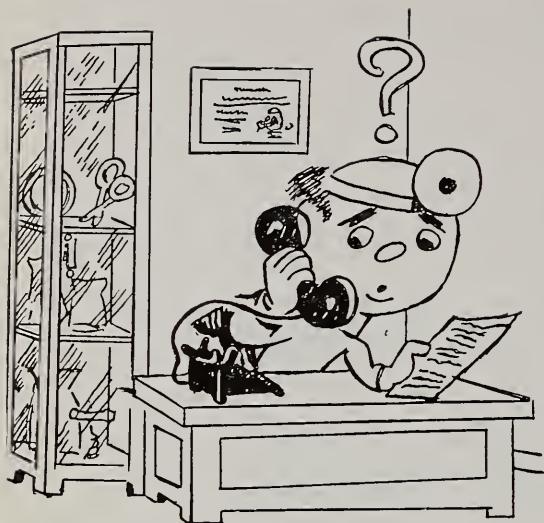
Fighting hunger in places like Kabul is just one task of the UN's 19 Specialized agencies and international organizations. Elsewhere, UN teams combat floods, wage war against disease, fight illiteracy.

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UNITED STATES COMMITTEE FOR THE UNITED NATIONS, BOX 1958, WASHINGTON 13, D. C.



ANSWERING

QUESTIONS



What Have We Proved?

The earliest statewide pre-payment plans for medical care were started just twenty years ago, and this seems like an appropriate time for us physicians to tote up our achievements in creating and sponsoring the mechanism we call Blue Shield.

What, essentially, have we accomplished through Blue Shield?

Most obvious is the fact that through our Blue Shield Plans, we are helping one out of every four people in the U.S.A. to prepay for basic medical service.

Through these Plans, we physicians have set the pace and pattern for the evolution of the entire voluntary medical care insurance program in the U.S.A.

Through Blue Shield, we have proved that medical care can be prepaid by voluntary cooperation of doctor and patient on a nationwide scale — with free choice of physician for the patient, fee-for-service for the doctor, and a private confidential relationship between them — and that the American people like it that way.

Through Blue Shield, we have shown that patients and doctors don't need any outside agency to bring them together, and that no one but the patient himself needs to profit from prepaying his medical care costs.

Through Blue Shield, it is fair to say that we doctors have given our fellow countrymen perhaps the most convincing demonstration of the past twenty years that, working together voluntarily, we can solve even our most urgent and complex social problems within the framework of our private enterprise system in the U.S.A.

County Society Notes

KNOX

January 13, 1959

C. Philip Lape, M.D., of Portland was guest speaker at the January meeting of the Knox County Medical Association which was held at the Copper Kettle in Rockland. Dr. Lape's subject was "Vascular Diseases."

Grand Rounds at the Medical Arts Building at 4:00 p.m., preceded the scientific meeting.

LINCOLN-SAGADAHOC

January 20, 1959

The annual meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges, Wiscasset on January 20. There were 15 members present.

The guest speaker, J. Denny Hall, M.D., of Boston spoke on "Chronic Renal Disease and Nephrosis."

The following officers were elected for the coming year:

President, Harry M. Wilson, M.D., Bath

Vice-President, John F. Andrews, M.D., Boothbay Harbor

Secretary-Treasurer, Richard I. Clark, M.D., Bath

Delegates to the Maine Medical Association: John F.

Dougherty, M.D., Bath and John F. Andrews, M.D.

Alternates: Ralph C. Powell, M.D., Damariscotta and

Edward L. Kinder, Jr., M.D., Bath

Board of Censors: Samuel L. Belknap, M.D., Damariscotta; George W. Bostwick, M.D., Newcastle and John

F. Dougherty, M.D.

GEORGE W. BOSTWICK, M.D.
Secretary

YORK

January 14, 1959

The annual meeting of the York County Medical Society was held on January 14 at Spicer's Galley, Cape Porpoise.

The annual report of the Secretary-Treasurer was read and approved.

The following officers were elected for the coming year:

President, William E. Dionne, M.D., Springvale

Vice-President, Robert F. Ficker, M.D., Kennebunkport

Secretary-Treasurer, Charles W. Kinghorn, M.D., Kittery

Board of Censors: Stephen A. Cobb, M.D., Sanford; Maurice Ross, M.D., Saco and Louis C. Lesieur, M.D., Saco

Delegates to the Maine Medical Association: J. Robert Downing, M.D., Kennebunk; Roger J. P. Robert, M.D., Saco and S. Dunton Drummond, M.D., Bar Mills. Alternates: Kenneth J. Cuneo, M.D., Kennebunk; Leon R. Jellerson, M.D., North Berwick and Alexander W. Magocsi, M.D., York

Board of Resolutions: H. Danforth Ross, M.D., Sanford; Ruth E. Freeman, M.D., Ogunquit and Marcel D. Ouellette, M.D., Sanford

COUNTY SOCIETIES

ANDROSCOGGIN

President, Ross W. Green, M.D., Auburn
Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

President, John B. Madigan, M.D., Houlton
Secretary, Clyde I. Swett, M.D., Island Falls

CUMBERLAND

President, Franklin F. Ferguson, M.D., Portland
Secretary, Albert Aranson, M.D., Portland

FRANKLIN

President, Wallace H. Duffy, M.D., Farmington
Secretary, Paul E. Floyd, M.D., Farmington

HANCOCK

President, Arthur M. Joost, Jr., M.D., Bucksport
Secretary, Russell G. Williamson, M.D., Blue Hill

KENNEBEC

President, Howard H. Milliken, M.D., Hallowell
Secretary, Arch H. Morrell, M.D., Augusta

KNOX

President, David V. Mann, M.D., Camden
Secretary, Robert H. Eddy, M.D., Rockland

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Publicity, Melvin Bacon, M.D., Sanford

Auditing: Stephen A. Cobb, M.D. and Melvin Bacon, M.D.

James W. Sever, M.D., of Cape Neddick was elected to membership.

The report of the diabetic detection drive stated that 14,000 tests were made during the week.

Luke Gillespie, M.D., of Boston, Instructor in Obstetrics at Harvard Medical School and practicing Obstetrician at Boston Lying-In Hospital, gave an interesting talk entitled "Medical and Surgical Problems In Obstetrics."

There were 34 members present at the meeting.

CHARLES W. KINGHORN, M.D.
Secretary

(The following is reprinted from *The Word* published by The New England Diabetes Association, Volume II, Number 1, November, 1958.)

BACON FROM SANFORD

Catalyzed by the efforts of Dr. Melvin Bacon, NEDA member and one-man diabetes task force from Sanford, eighteen local physicians from the York County, Maine, area observed the 1957 Diabetes Week in a manner which won commendation from the regional office of the United States Public Health Service. They set a standard for their area which could well be emulated by any county in the United States, regardless of size.

This program, which was sponsored by the York County Medical Society, was headed by the 18 physicians who served as chairmen for their respective towns and areas. Complete community cooperation was the keynote. More than 10,000 people saw several diabetes films which were shown in the

local motion picture theatres as well as to service and professional clubs.

All of the hospitals in the county did blood sugar tests at reduced fees and urinalyses free. Special drives were arranged to provide urine tests for school children and those employed in industries. The climax of the week's activities involved the testing of 4,050 urine specimens at physicians' offices, hospitals, industries and schools. Seven thousand additional specimens were examined at the United States Navy Yard in Kittery, Maine. Excluding the Navy Yard, over four percent of the total county population were tested.

In the areas where there were no physicians, public health nurses carried on the detection drive, which was also directed by co-members of the York County Medical Society Committee on Diabetes, Dr. M. K. Moulton and Dr. C. E. Richards. A total of 25,000 diabetes pamphlets and 350 posters were distributed.

Doctor Bacon, who graduated from Lausanne in 1939, has a hobby of motivating diabetes activities and has done so successfully with Diabetes Weeks in previous years.

New Members

YORK

James W. Sever, M.D., Cape Neddick.

Deceased

ANDROSCOGGIN

Leroy C. Gross, M.D., 19 Goff Street, Auburn, January 23, 1959.

CUMBERLAND

Albert A. Darche, M.D., 782 Main Street, Westbrook, January 13, 1959.

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Announcements

Department Of Health And Welfare Division Of Mental Health

MENTAL HEALTH CLINIC SCHEDULE

The Division of Mental Health offers psychiatric clinic service to children and adults in the following areas:

*Portland — Department of Health and Welfare
178 Middle Street — 2nd and 4th Tuesday

Lewiston-Auburn — Department of Health and Welfare
70 Court Street, Auburn — 2nd and 4th Monday

Waterville — Mansfield Clinic
Thayer Hospital — 2nd Wednesday

Bangor Area — Psychology Department
University of Maine, Orono — 1st Wednesday

Augusta — Department of Health and Welfare
State House — 2nd and 4th Wednesday

A travelling clinic visits the following areas at irregular intervals — Belfast, Caribou, Ellsworth, Machias, Presque Isle, Rockland and Rumford.

*Portland Clinic — admissions are limited to cases referred by other divisions within the Health and Welfare Department. Although the clinic is open daily with a psychologist and secretary in attendance, the psychiatrist is present on Tuesday only.

Referrals — may be made by physicians, parents, school agencies, school superintendents, families, social agencies, other State Departments and all divisions within the Department of Health and Welfare. Application forms may be obtained from the main office of the Division of Mental Health, State House, Augusta.

Appointments — Individuals will be seen by appointment only. Each child must be accompanied by a parent or legal guardian. If there is a language problem, the family should provide an interpreter.

Applications should be sent to the Director, Division of Mental Health, Department of Health and Welfare, State House, Augusta, Maine.

New M.D.'s In Maine

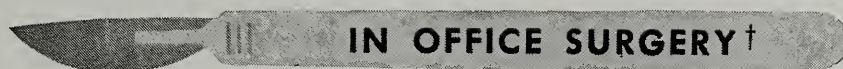
H. S. Baar, M.D., Pineland Hospital and Training Center, Pownal — Director, Department of Pathology.

Philip Blinder, M.D., 128 Broadway, Bangor — Psychiatry.

Stephen E. Monaghan, M.D., 265 Western Promenade, Portland — Orthopedic Surgery.

Morris J. Seligman, M.D., Veteran's Administration Center, Togus — Psychiatry.

Harold N. Willard, M.D., Thayer Hospital, Waterville — Rehabilitation.



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Pineland Hospital And Training Center Pownal, Maine

Carl Hedin General Hospital Red Room
1959
February 19 Lecture — Diabetes and Mental Retardation 11:00 A.M.
" 26 " — Cystinosis 11:00 A.M.
" 19 Clinical Pathological Conference 10:00 A.M.

American College Of Allergists

The fifteenth Congress and Graduate Instructional Course in Allergy will be held at the Mark Hopkins Hotel in San Francisco, California, March 15 through 20, 1959.

This course meets American Academy of General Practice Standards of postgraduate study for Category 11 credit for its members.

For further information and registration blank write: The American College of Allergists, John D. Gillaspie, M.D., Treasurer, 2049 Broadway, Boulder, Colorado.

American College Of Obstetricians And Gynecologists

The American College of Obstetricians and Gynecologists will hold its annual meeting in Atlantic City, April 6 through 8, 1959 with general sessions in Convention Hall.

Besides the presentation of papers by leading obstetricians and gynecologists from all parts of the country, there will be breakfast and clinical conferences, panels, motion picture programs and scientific exhibits, it was announced by Dr. Robert H. Barter, Washington, chairman of the Committee on Program. One panel will deal with radiation hazards in obstetrics and gynecology, and another will cover psychosomatic aspects.

A feature will be the presentation of 12 research project reports. These will cover the early diagnosis of multiple pregnancy, labor problems, oxygen administration, anesthetics, endocrine functions, and other topics.

Further information may be had by writing to Mr. Donald F. Richardson, Executive Secretary, The American College of Obstetricians and Gynecologists, P. O. Box 749, Chicago 90.

American College Of Surgeons

Members of The Maine Medical Association are invited to attend a Sectional Meeting of The American College of Surgeons to be held at The Queen Elizabeth, Montreal, April 6, 7, 8, and 9, 1959.

The program will include separate sessions in anesthesia, general surgery, gynecology and obstetrics, ophthalmic surgery, orthopedic surgery, otolaryngology and urology. Extensive programs and hospital demonstrations are scheduled for nurses as well as early morning hospital clinics for general surgeons and surgical specialists. A reception and dinner will be held for visiting surgeons and their wives.

For further information contact Harry S. Morton, M.D., Chairman, Committee on Arrangements, 40 East Erie Street, Chicago 11, Illinois.

American Goiter Association

The 1959 meeting of The American Goiter Association will be held in The Drake Hotel, Chicago, Illinois, April 30, May 1 and 2, 1959. The program for the three-day meeting will consist of papers and discussion dealing with the thyroid gland, its physiology, pharmacology, pathology and therapy. For further information write: John C. McClintock, M.D., Secretary, 149½ Washington Avenue, Albany 10, New York.

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The Journal of the Maine Medical Association

Volume Fifty

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Number 3

Current Concepts In Vascular Surgery

I. Arterial Grafts

ELIE D. ABOULAFIA, M.D.* AND ALLAN D. CALLOW, M.D.**

This paper is the first in a series of articles on current concepts in vascular surgery. It is written primarily for the general practitioner because he, more often than not, is the first physician to see the patient. It is intended as a brief review of a new and rapidly changing field. Because of space and time limitations, and at the risk of appearing dogmatic, we shall not dwell on controversial issues nor quote extensively from the literature. We do wish to discuss important concepts concerning diagnosis and treatment of vascular diseases. We also wish to present a preliminary evaluation from our own and others' experience of the usefulness of arterial grafts, thrombendarterectomy, sympathectomy and resection of aortic aneurysms.

INTRODUCTION

In 1929, Brooks¹, then Professor of Surgery at Vanderbilt University, wrote: "If one only contemplates the vast number of opportunities which were presented for the discovery of circulation of the blood and recalls the simplicity of the experiments of William Harvey, one is amazed that this discovery could have been deferred

so long. It would seem as if a sort of mysticism always assigned to the cardiovascular mechanism had prevented the appreciation of its *simple realities*." This was true of arterial surgery until a few years ago when, after World War II, the application of experimental data to clinical problems resulted in our present progress. Because of more exact diagnosis and more effective therapy many patients are able to return to gainful occupations and a normal life. Today segmental occlusion of the superficial femoral artery does not necessarily imply amputation and an aneurysm of the aorta may not mean early death. It is of great importance therefore that the practicing physician be familiar with the therapeutic potentials of vascular surgery.

HISTORICAL REVIEW

Until 1902 vascular surgery consisted of little more than occasional reports about arterial repair. In that year, Alexis Carrel² published the paper which introduced the field of vascular surgery as a contemporary specialty. This was not wholly intentional for Carrel was primarily interested in organ transplantation. He needed a technique for anastomosing the blood vessels of the newly transplanted organ to the vessels of the host and as a result perfected his classic triangulation suture technique (Fig. 1). Except for a few additional contributions, mostly by Carrel and a few military surgeons there was very little progress for almost fifty years. During World War I, injury to a major arterial trunk of an extremity was almost synonymous with amputation. When vascular repair was attempted it was

*Research Fellow in Surgery, New England Center Hospital. Supported in part by the "Worcester North Chapter Fellowship for Research in Vascular Surgery at the New England Center Hospital" — a Chapter of the Massachusetts Heart Association.

**Associate Professor of Surgery, Tufts University School of Medicine. Surgeon, New England Center Hospital.

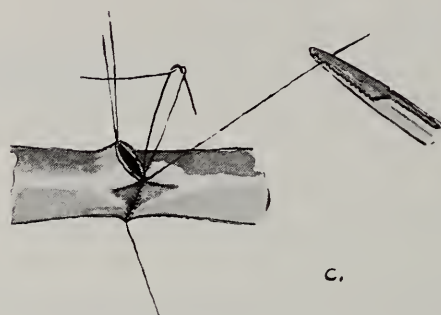
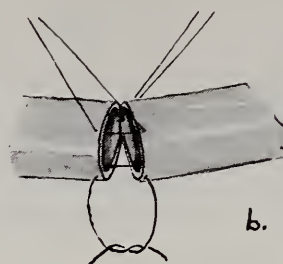
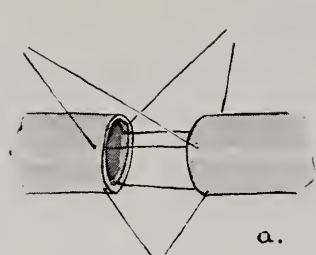


Fig. 1-

Carrel's Triangulation Technique of Blood Vessel Anastomosis

frequently too late and the results were quite poor and occasionally disastrous.³ Between the wars there was little stimulus for development of vascular surgery. Need for arterial surgery was confined almost entirely to problems of trauma. Only a few pioneers, here and abroad, worked in the laboratory and fewer still in the clinic. Basic studies in the physiology and pathology of blood vessels, the introduction of safer arteriography and other diagnostic procedures and the development of antibiotics and anticoagulants have all contributed towards the significant clinical advances which we have witnessed a little over the past decade. During World War II, interest was revived in surgery of the blood vessels. With the development of higher powered explosives, incidence and severity of vascular injuries kept increasing and the need for arterial substitutes became acutely apparent.

Progress in the laboratory was rapidly applied to clinical practice. Hufnagel in 1947 successfully transplanted preserved artery homografts from one dog to another,⁵ and one year later Gross⁶ and his associates reported successful arterial homograft transplantations in humans. Many techniques for sterilizing and preserving homografts were quickly perfected. Plastic synthetic grafts appeared on the scene and during the past ten years there has been a mushrooming accumulation of data about clinical applications, sometimes routine and sometimes of heroic proportions. Vascular surgery is no longer confined to the repair of the acute arterial injury and occasional traumatic malformation. It has been extended into the field of congenital anomalies and degenerative diseases of the arteries. The latter, today, constitute the chief indications for reparative arterial surgery.

ARTERIAL GRAFTS

An arterial graft is a conduit designed to re-establish blood flow to an area of the body after the original artery has been destroyed or damaged by disease or trauma.

This by definition becomes a connecting tube between proximal and distal points of the arterial tree. There are three principle situations in which arterial substitutes may become necessary:

1. *Trauma* to an artery destroying a portion of the wall to an extent that after debridement end-to-end approximation of the divided ends cannot be accomplished.
2. *Tumor* involving an artery or its contiguous tissues, treatment of which requires excision of the artery.
3. *Degenerative and congenital diseases* of arteries with occlusion of the lumen or disruption of the wall. This includes malformation such as coarctation of the aorta when extensive, (Fig. 2) some cases of arteriovenous fistulae, post-traumatic and degenerative aneurysms and atherosclerotic and thrombotic occlusions of the major vessels.

These three conditions, each with a different etiology, create the same clinical problems; i.e., re-establishment of blood flow to the periphery; be this at the time of debridement for injury in the course of radical cancer surgery or in the patient with obliterative disease of the aortic bifurcation^{7,8} or other major vessels.

A successful graft fulfills two criteria:

1. continuation of function, and
2. amelioration of symptoms.

Should a graft become thrombosed or otherwise fail, there is obviously no benefit to the patient. In early years of grafting when all grafts were inserted by an end-to-end technique such failure was often harmful particularly in the lower extremity where it left the leg in worse circulatory condition than prior to operation. Today, as a result of progress in our knowledge about grafts, methods of insertion, the more frequent use of a bypass technique whereby potential and actual collaterals are left intact and particularly through better selection of patients for grafting procedures, a significant increase in the proportion of long-term success is

being reported. We shall deal with this matter in greater detail in a subsequent article.⁹ Presently we shall briefly review some general and special characteristics of grafts.

Arterial substitutes can be divided according to their origin into animal or artificial groups. The former includes venous autografts, arterial homografts and arterial heterografts. We shall explain these terms and describe them in more detail.

VENOUS AUTOGRAFTS

A vein such as the greater saphenous which can be spared in an individual is removed from its original location and used to replace or bypass a segment of the arterial tree of the same individual. The main recommendation for their use is that they remain viable and being autogenous they do not elicit any reactions of an immunologic nature. The results of their use vary with the reporting investigator more so than with any other type of graft. Incidence of early and late thrombosis is high¹⁰ and aneurysm formation with or without rupture has been reported,¹¹ yet a few surgeons prefer them.¹²

ARTERIAL HOMOGRAFTS

This consists of an artery removed from one individual and implanted in another individual of the same species as for example, dog to dog or human to human. Such arteries must be carefully processed and sterilized in accordance with very exacting techniques. They have been, and still are, used with satisfactory results, but their main limitation lies in the difficulties of procurement, sterilization and storage. Although remarkable advances have been made in processing techniques, the arterial homograft does require extensive equipment and trained personnel beyond the reach of most hospitals which require grafts infrequently. Procurement is the main problem with the increasing demand for larger numbers of grafts. Donors must meet rigid requirements to be considered suitable for clinical use.¹³ These standards essentially are:

1. Death due to causes other than neoplastic or communicable disease,
2. The graft must be removed from the body promptly after death, within a matter of one to two hours without refrigeration or up to 24 hours with refrigeration of the body at 4° Centigrade.
3. At autopsy there must be lack of gross evidence of atherosclerosis in the aorta and its major tributaries.

The difficulties attendant upon these requirements are illustrated by a joint report from two large hospitals in metropolitan New York.¹⁴ Of 918 autopsies performed in both hospitals in one year, only 54 (5.9%) yielded arteries suitable for use as homografts. The additional difficulties of processing, sterilizing and preserving the grafts make it readily understandable why synthetic substitutes have been sought.

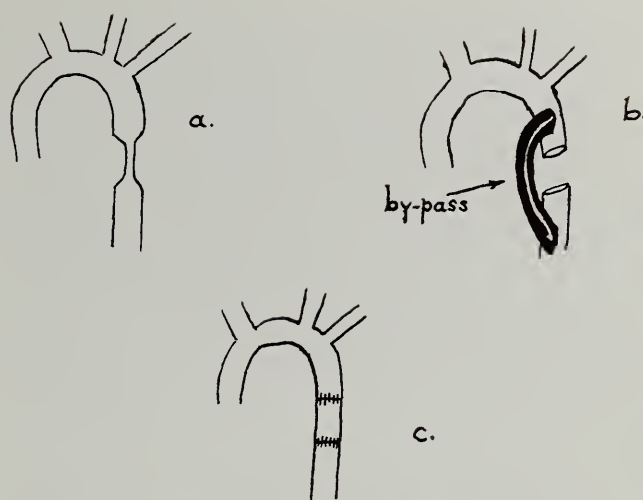


Fig:2 - Coarctation of the Aorta.

ARTERIAL HETEROGRAFTS

Are arteries taken from animals of a species different from that into which they are to be implanted. Many examples and uses can be found in experimental literature but at the present time, due largely to immunologic reactions, they are unsuitable for clinical use.

SYNTHETIC GRAFTS

For all practical purposes synthetic grafts today are manufactured from what is commonly referred to as "plastics." The outstanding advantage of these substitutes is their great availability and the ease of storage and sterilization. They can be stored for indefinite periods of time without deterioration and can be sterilized, for the most part by autoclaving, like other surgical supplies. They can be easily stockpiled or transported and are presently available commercially in a variety of lengths, diameters and shapes. They fill the need for the small civilian or military hospital where special facilities are not available for using homografts. A great deal of experimental work has been done with synthetic grafts and a variety of plastics have been used. These include Polyethylene¹⁵, Vinyon-N¹⁶, Ivalon sponge¹⁷, Nylon¹⁸, Dacron^{19,20}, Orlon²¹, and Teflon^{22,23}. Rigid tubes made of Vitallium⁴ or Lucite²⁴ are for the most part quite unsatisfactory except in special circumstances. Some of the above have been abandoned and others are enjoying considerable success. Hufnagel²⁴ summarized the features of the ideal synthetic graft of the rigid variety as follows:

1. It should be biologically inert, and cause no harmful reaction in the host.
2. It must have adequate strength to withstand the dynamic forces of the arterial system, as well as the enzymatic reaction of the surrounding tissues.
3. Graft must resist clotting, i.e. possess a blood repelling quality.
4. Internal surface of the graft must be smooth to

decrease the chances of intra-luminal thrombosis due to "trapping."

5. It must be adaptable to performing a smooth junction between vessel and graft.
6. Anastomosis must be done in a way which would not produce necrosis of the anastomotic line.

For the pliable prosthetic we must add that the graft must possess the ability to maintain patency when subjected to kinking such as occurs when the graft extends over flexion surfaces in the antecubital, inguinal or popliteal regions. Many flexible grafts although perfectly suitable for short-term use underwent kinking when placed in the vicinity of a joint. Edwards and Tapp¹⁸ demonstrated that the process of circular crimping could prevent obstruction of the lumen of a graft and buckling at the point of greatest stress when bending occurred. A certain degree of porosity is commonly recognized as a desirable feature for the ingrowth of fibroblasts. The Edwards®* graft has yielded very satisfactory results in both the operating room and in the laboratory.

FATE OF THE ARTERIAL GRAFT

It is of considerable interest to examine the graft microscopically after varying periods of implantation. A brief resumé of the changes is pertinent to the present discussion. As may well be imagined the microscopic changes depend very much upon the type of graft used. Autografts may remain viable with little or no alteration in the walls of the artery and preservation of the intima and other layers. In the case of the autogenous vein transplanted into the arterial tree, hypertrophy of the muscular layer develops. This appears to be a simple reaction of adaption hypertrophy so that the thin wall of the vein adjusts to the higher pressure of the arterial system. Venous autografts when unsupported by surrounding muscle and passing through an area such as the pelvis where adequate support cannot be developed, may undergo aneurysmal dilatation. *Homografts* are apparently completely replaced, eventually, by host tissue through a process of fibroblastic infiltration. The elastic lamina appears to be the last layer of the homologous artery to disappear. There is increasing evidence that arterial homografts may be more prone to secondary atheromatous changes than are certain prosthetic plastic substitutes²⁵. In addition, increasing evidence is developing concerning the late degenerative changes, both atherosclerotic degeneration and aneurysmal dilatation with eventual rupture, of certain homografts in certain locations.^{26,27} In the pliable prosthetic grafts made of plastic cloth the graft apparently serves as a scaffold around and through which the host

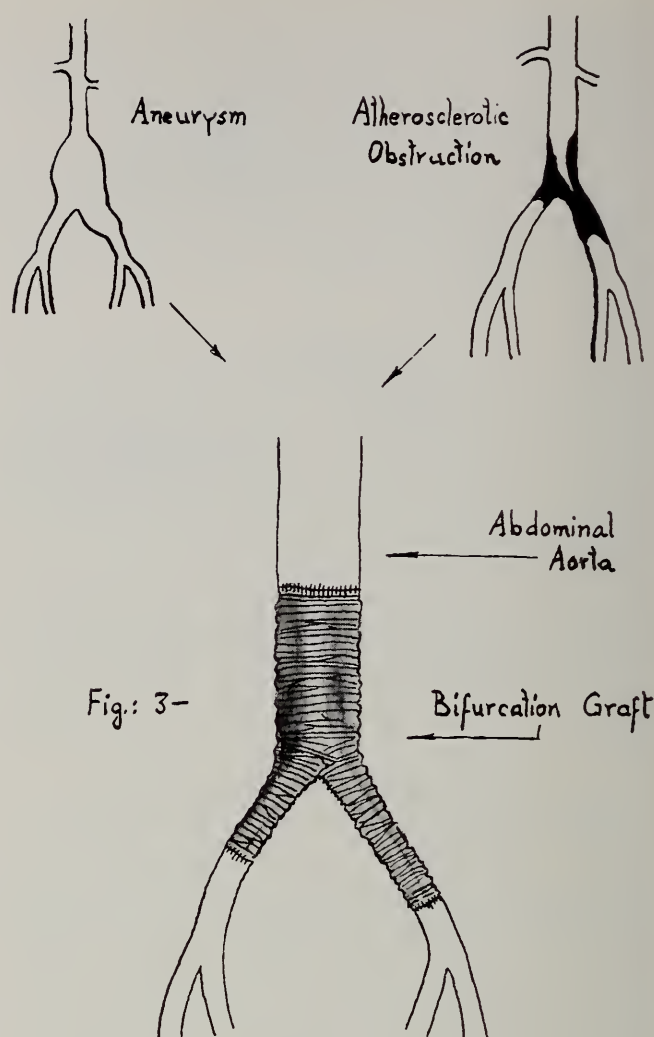


Fig: 3-

builds a wall of fibrous tissue. A neointima is formed primarily by fibroblastic ingrowth of the surrounding tissues and not necessarily from the intima of the adjacent host artery at either end of the graft although this may contribute in some instances to the new intima. Some of the plastic fibers lose much of their initial strength either through fatigue from the constant motion of the pulse wave or from absorption of water. It is interesting to note that Teflon grafts do not lose any of their strength after being implanted for significant lengths of time.²²

Before concluding we would like to mention briefly the intriguing possibility of using heterografts in humans. Newton²⁸ and his associates have recently reported the use of equine carotid arteries modified by partial peptic digestion, used as femoral bypass grafts in 16 humans. Of these 16, six were reported as failures postoperatively and ten as late failures. The longest functional result was 26 months which eventuated in thrombosis and multiple aneurysmal dilatations. Although from these results it appears obvious that heterografts are not safe for clinical application, at present, it may not be presumptuous to predict that with further refinements they may find a place since they are

*Manufactured by the United States Catheter and Instrument Corporation, Glens Falls, New York. Teflon grafts, for our experimental needs, have been generously supplied by Mr. Norman C. Jeckel, U. S. Catheter and Instrument Corporation, Glens Falls, New York.

of a consistency which makes handling easy. The increasingly successful use of plastic prostheses, however, appears to be a deterrent to significant investigation in this area.

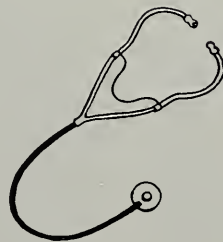
It is obvious that constant improvements are being made in this aspect of arterial surgery. The ideal arterial graft appears well within our reach or at least shortly so. Problems relating to the selection of patients are decreasing with increasing experience. Follow-up studies of sufficient length to become significant are now appearing and will determine the future course of grafting procedures.

SUMMARY

In this first article of a series, a brief historical review of arterial surgery is presented. Characteristics and variety of arterial grafts with their relative merits and faults are reviewed. The significant advances made in recent years in perfecting arterial grafts point to the vast potentialities of their clinical applications.

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Living And Working With Heart Disease*

LEONARD J. GOLDWATER, M.D.**

The purpose of this paper is to summarize the results of a series of studies which were started in 1941 and have been continued up to the present time. All of these studies deal with the occupational potentialities of persons who have heart disease. The term "cardiac rehabilitation" has been applied to this work although this may be something of a misnomer.

The fact that physical impairments of one sort or another may result in employment problems has been appreciated for many years. Formal recognition of the employment problems of cardiacs dates back at least to 1913, at which time there was established in New York City a Trade School for Cardiac Convalescents.¹ Unfortunately this venture had a life of only three years, so that any long term follow-up of patients was precluded. An Employment Bureau for the Handicapped was operated by the Hospital Social Service Association of New York City from 1918 to 1922. During that period approximately one thousand cardiacs were placed in regular industry and a few of these were followed for about a year. They are described as having responded favorably.

Between 1920 and 1940 a number of articles appeared in the medical literature dealing with the rehabilitation or placement of cardiacs in industry. These articles are summarized in a paper published in 1956.² One or two of these contain follow-up data for as long as five years, but in general long range observation was somewhat limited.

In 1941 there was established at Bellevue Hospital in New York the first Cardiac Work Classification Unit. The primary purposes of this Unit were:

1. To assist in solving the employment problems of cardiacs.
2. To develop methods whereby this could be done most effectively.
3. To study the effects of employment on the course of heart disease.
4. To study the effects of heart disease on ability to work.

It was anticipated that a period of twenty years might be required to achieve these objectives. As a matter of fact the Bellevue Work Classification Unit voluntarily closed its doors after 15 years of operation

since it was felt at that time that the original purposes had been accomplished. Some of the more significant findings form the basis for this paper. Passing mention may be made of the fact that at least fifty Cardiac Work Classification Units, modelled after the Bellevue Unit, are now functioning across the country, and additional Units are constantly being organized. At the present time consideration is being given to starting such a program here in Vermont.

EARLY STUDIES

In order to obtain background information an occupational analysis was carried out covering 2,081 patients who were attending cardiac clinics in New York in 1941. Since the subjects studied were clinic patients, and hence represented a segment of the population with low income, no generalized conclusions could be drawn from this analysis. It was possible, however, to obtain a certain amount of useful information, details of which were published in 1944.³

The clinic patients whose records were analyzed were divided almost evenly between males and females. All age groups, all important etiological types and all degrees of severity of heart disease were represented in substantial numbers. The major findings of this study were:

1. Of the males, 47 per cent were working.
2. Of the females, 84 per cent were working.
3. The types of occupation included professional, clerical, skilled, semi-skilled and unskilled work.
4. Among the females who were working, 78 per cent were doing housework. A detailed analysis of this group showed that most of them were doing what for a woman would be described as heavy work. As a result of these findings, at least one conclusion seemed justified, namely, that a fairly large proportion of cardiacs can work and actually *do* work.

The study just described represents a superficial analysis of a group of cardiac clinic patients and their occupational status at a single point of time. It throws no light on the effects of employment on the course of heart disease. Subsequent studies were designed to remedy this deficiency.^{4,5,6}

In order to study the effects of employment on the course of heart disease and the effects of heart disease on ability to work, it is necessary to have occupational data and medical data for the same group of patients covering many years. If it were possible to compare a number of working cardiacs with a similar number of

*Paper prepared by Dr. Goldwater for delivery at Vermont Heart Association, Annual Meeting, October 1, 1958, Burlington, Vt.

**Professor of Occupational Medicine, School of Public Health and Administrative Medicine, Columbia University.

non-working patients, the value of the studies would be greatly enhanced. Such an experimental procedure, however, offers almost insuperable difficulties. Rarely is it possible to perform the same kind of matching of control and experimental subjects that is done in other types of clinical or laboratory research.

In spite of the built-in difficulties and limitations, the staff of the Bellevue Work Classification Unit undertook a detailed analysis of the medical and occupational histories of 580 cardiac clinic patients, many of whom had been under observation for more than 15 years.⁴ The study group included only those who were living and in active clinic attendance in 1949, but it embraced both working and non-working patients. Obviously analyses of such a biased sample must be interpreted with caution, nevertheless a good deal of significant information was obtained. Some of the major observations were:

1. The ability of many cardiacs to work received further confirmation.
2. Occupational activity does not necessarily lead to progression of heart disease.
3. A substantial number of cardiacs show improvement while in an employed status.
4. Many cardiacs can return to their original jobs following such cardiovascular episodes as a myocardial infarction, congestive failure, rheumatic activity, auricular fibrillation or severe angina.
5. Episodes of the type just listed may not be any more frequent in the employed than in the unemployed cardiac.

As a general conclusion it can be stated that these analyses revealed no evidence that employment *per se* has any adverse effect on the course of heart disease and that heart disease does not necessarily impose any serious limitations on ability to work.

SPECIAL STUDIES

The older Cardiac Patient.

In view of the fact that increasing age generally results in greater employment problems, a special study of cardiacs over the age of 55 years was undertaken. Detailed results of this study were published in 1953.⁷

Analyses were made of 236 patients who were 55 years old or older at the time when heart disease was originally diagnosed. As might have been anticipated, the employment experience of these individuals was less favorable than that of younger cardiacs. Part of the difficulty was due to the fact that the cardiac functional capacity of patients whose heart disease develops after age 55 is usually initially diminished to a greater degree than is the case in younger persons. A second difficulty lies in the fact that employment opportunities in general are somewhat restricted for the elderly.

In spite of the difficulties experienced by these older cardiacs, it was found that among the 236 patients, 36 per cent were employed full time and an additional

21 per cent part time. The jobs which they held varied from professional to unskilled work. As was the case with cardiacs in general, there was no evidence found in this study to indicate that continued employment had any adverse effect on the course of the heart disease.

Congestive Heart Failure.

In the course of the studies mentioned above it had been observed that many patients with severe heart disease had been able to continue in employment. Among the important factors were the will to work and the application of suitable therapy. When the former exists within the patient and the latter is applied, even the presence of congestive failure is not incompatible with full time work. A small group of patients who continued to work in spite of the presence of congestive heart failure was reported on in 1957,⁸ and a much larger group is now being studied. Strong motivation to work has been found to be a common denominator in all of these patients, but this alone would not be sufficient. The availability of modern therapeutic measures including cardiac surgery, salt restriction and organomercurial diuretics (parenteral and oral) has played an important role along with digitalis, quinidine and ammonium chloride.

Mistaken Diagnoses.

It has been said in connection with medical diagnosis that it is usually quite easy to recognize what is abnormal but often very difficult to recognize what is normal. This was certainly borne out by observations made at the Bellevue Work Classification Unit. All patients seen at the Unit were referred because of employment difficulties that were attributed to heart disease, but of the first 631 cases studied some 28 per cent were found not to have heart disease. A detailed analysis of this group was published in 1952 in an article entitled "A Study of one hundred seventy-five 'Cardiacs' without heart disease."⁹ It was apparent from this study that most of the errors could have been avoided if the examiner had used accepted diagnostic criteria such as those promulgated by the New York Heart Association.¹⁰ Among the lessons learned from this study was that before any attempt is made to adjust an individual's work situation to the capacities of a damaged heart it is well to be certain that heart disease actually is present.

Difficult cases.

The tone of this review up to this point has been one of optimism. As a matter of fact there is ample reason for optimism as far as the occupational potentialities of many cardiacs are concerned. There are some, however, for whom the possibility of substantial gainful employment is extremely limited. No special study was made of those in the difficult group, but a number of relevant factors emerged in the course

of other analyses. Some of these factors have already been mentioned. A more complete list includes the following:

1. Older age.
2. Lack of motivation.
3. Lack of education, skill or aptitude.
4. Limited employment opportunities in the labor market.
5. Fear on the part of the patient, his family, his doctor or a prospective employer.
6. Legal litigation.
7. Difficulties in travel.
8. Deficiencies in medical knowledge.

Age as an obstacle to employment was mentioned above. The existence of heart disease in an older person certainly does not enhance his possibilities. In some communities there may be a sheltered workshop for those who cannot find regular employment, but such facilities are limited. Vocational re-training may be advisable in a few cases, but should be undertaken only if there is reasonably good chance of a job being available.

Cardiacs whose physical condition would permit full time or regular employment, but who lack the will to work frequently need psychiatric help. The difficulty often rests on an underlying emotional disturbance or some other form of psychological maladjustment. They are indeed difficult cases since many of them appear not to want to be helped.

Individuals with limited education and without skills or aptitudes always offer employment problems. When heart disease is superimposed the situation becomes more difficult and when advanced age is also present it becomes practically hopeless. A scarcity of labor, such as existed from 1941 to 1945 may create employment opportunities for those who otherwise would not be hired but when the labor market is normal or over-supplied the outlook for the unskilled cardiac is pretty dim.

The element of fear as an obstacle to employment is of major importance. Fear on the part of a patient that dire consequences may follow resumption of employment can be more disabling than the underlying lesion in the heart. Over-protective families often aggravate the situation and the over-cautious physician does little to help. The only hope lies in the education of all concerned. The existence or threat of legal litigation, either in workmen's compensation, negligence actions or in relation to insurance benefits not infrequently result in unduly prolonged periods of occupational idleness. Zealous lawyers may not always realize that physical and psychological damage resulting from prolonged legal proceedings may far outweigh any financial benefits the patient receives.

In many communities, travel between home and place of work calls for an expenditure of energy which

exceeds that demanded by the job itself. The ultimate solution of this particular problem lies in over-all community planning.

A good deal of valuable information has been developed during the past few years as to the effects of employment on the course of heart disease, but much still remains to be learned. Long range follow-up studies of a controlled type are still needed. Another important gap in knowledge is found in the field of tests for physical capacity to work. There is still no practical and reliable method of measuring objectively a patient's ability to meet the physical demands of a specific job.

CONCLUSIONS

For the cardiac who wants to work, the outlook today is far brighter than it was a decade ago. Strong evidence is now available that most persons with heart disease who are intelligently placed and who remain under medical supervision can look forward to many years of gainful employment. The outlook for them is certainly no worse, and is probably better than it would be if employment were to be terminated.

Medical research is constantly adding to the knowledge available to physicians and at the same time forcing the modification or rejection of older beliefs. It is now definitely known that the time-honored advice to cardiacs to "take it easy" may do more harm than good.

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National Diabetes Week In York County

MELVIN BACON, M.D.*

The 1958 National Diabetes Week, the eleventh annual observance sponsored by the American Diabetes Association, was observed countrywide from November 16 through the 22. The purpose was education of the public concerning diabetes and its detection. It is believed that there are one million known diabetics in the United States and another million unknown diabetics. It is this latter group that the association, through its affiliates, is attempting to discover.

The York County Medical Society, under the direction of its physician members, held an all-out drive and observance of this period for the fourth year. Because of the success attained in these drives, it was decided to present the plan utilized and the results obtained by this group for 1958. Special mention is made here of the local plan for Sanford which enjoyed a tremendous success and which will be described later.

Eighteen physicians were selected to carry out programs for their respective areas. They are as follows: Melvin Bacon, M.D., Sanford; A. M. Bonanno, M.D., Berwick; L. Carpenter, M.D., Limerick; J. Robert Downing, M.D., Kennebunk; S. Dunton Drummond, M.D., Bar Mills area; Ruth E. Endicott, M.D., Wells; Robert F. Ficker, M.D., Kennebunkport; Herbert J. Hopkins, M.D., Old Orchard; Leon R. Jellerson, M.D., North Berwick; Charles W. Kinghorn, M.D., Kittery; Robert LaFond, M.D., Saco; Alexander W. Magocsi, M.D., The Yorks; Paul C. Marston, M.D., Kezar Falls, Cornish areas; Marion A. K. Moulton, M.D., West Newfield; John J. Murphy, M.D., South Berwick; Carl E. Richards, M.D., Alfred; Gerald R. Smith, M.D., Ogunquit and Leopold A. Viger, M.D., Biddeford.

PLANS

Plans called for free examinations of urine for the detection of sugar by all members of the York County Medical Society and by the following hospitals in the county during this period: Buxton-Hollis Hospital, Bar Mills; Goodall Hospital, Sanford; Notre Dame Hospital, Biddeford; Webber Hospital, Biddeford; York Hospital, York Village and U. S. Naval Hospital, Kittery.

Tests for sugar in the urine were made with the Benedicts, Galatest®, Testape®, Clinitest® or Uristix® methods. In addition all persons showing glycosuria had the opportunity to have blood sugar tests performed at nominal fees on referral by their personal physicians.

Public Health Nurses conducted the detection and educational drives in areas where there were no physicians. They distributed diabetic literature to the school children to take home to their parents. In addition, literature was given to adults who participated in the program including the teachers and health council members.

Certain towns which have no physicians were under the leadership of the following nurses:

Acton, Lyman, Shapleigh, Eliot — Mrs. M. Clements, R.N.; Lebanon — Mrs. Beatrice Moody, R.N.; Limington — Mrs. Nellie Sawyer, R.N.; Waterboro and Dayton — Miss Helen Bassett, R.N.

All the drug stores in the county served as collection and testing centers.

PUBLICITY

Various media were used for publicity. Trailer movies featuring a one minute short on diabetes by well known personalities such as Jimmie Gleason, Ed Sullivan, John Daly and Dave Garroway were shown at various theatres in Biddeford, Kennebunk, Saco and Sanford. About 10,000 people attended these theatres and saw at least one of these film shorts.

An all-out radio drive was conducted to stimulate public interest in this disease. Radio programs with talks and spot announcements on diabetes were presented again this year over stations WIDE in Biddeford, Maine; WWNH in Rochester, N. H.; WHEB in Portsmouth, N. H. and WSME in Sanford, Maine. Several physicians participated in that part of the radio programs which involved talks on diabetes.

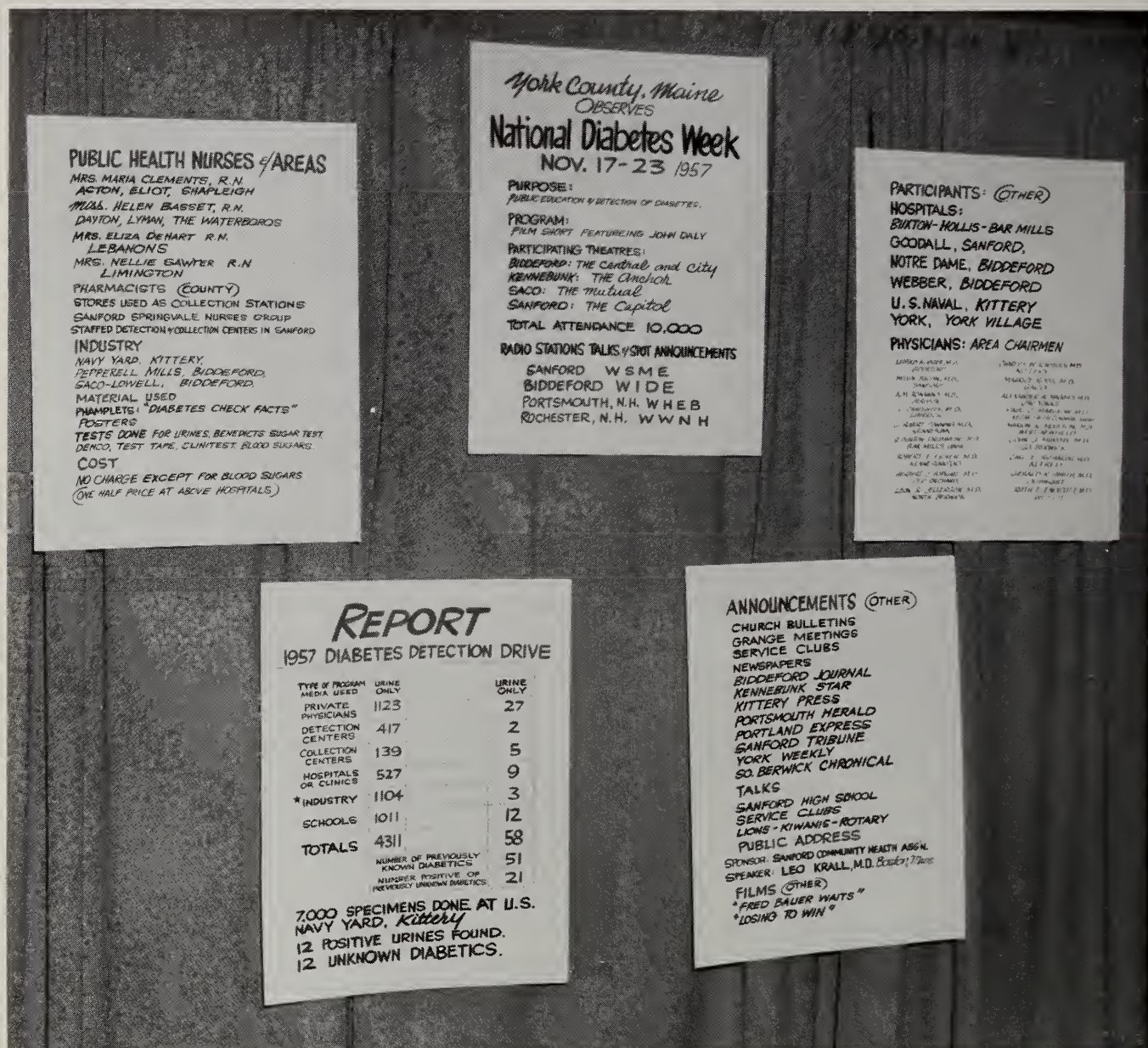
Three hundred and fifty posters were distributed all over the county and indicated the centers for diabetes tests. In addition, 40,000 diabetes pamphlets were distributed at the physicians' offices, at various hospitals and at meetings such as service clubs and Granges, industries, schools, U. S. Navy Yard and other detection centers.

Newspaper publicity was utilized to the utmost. The papers gave generously of their space, and the following papers participated:

The Sanford Tribune, The Kennebunk Star, The Biddeford Journal, The South Berwick Chronicle, The York Weekly, The Kittery Press, The Portland Press Herald, The Portsmouth (N. H.) Herald.

Interesting detection programs were carried out by various industries in York County. Those participants included the Pepperell and Saco-Lowell Mills in Biddeford, U. S. Navy Yard in Kittery, Waterboro Tannery

*Diabetes committee of York County Medical Society consists of Melvin Bacon, M.D., chairman; Carl Richards, M.D., and M. K. Moulton, M.D.



Diabetes exhibit, York County Medical Society at New England Diabetes Fair, Boston, November 18-19, 1958.

in Waterboro, Maine, and all the 20 industries in Sanford. The results obtained will be described later in this paper in a comprehensive report.

A feature of the county program was an informative exhibit which was on display at the New England Diabetes Health Fair in Boston. The display consisted of a series of posters which depicted the type of program and results obtained in the detection and educational drive on diabetes in York County as shown in the accompanying picture.

There were 14,175 individuals tested or 15 percent of the population of York County which is approximately 93,541. The incidence of glycosuria was found to be 152 cases or 1.1 percent of the 14,175 persons tested for sugar in the urine. Of the 152 cases of glycosuria, 46 persons were known to be diabetics. The remaining 106

Table-Results of 1958 Diabetes Detection Drive in York County

Type of Program Media Used	Number of Persons Tested for Sugar	Number of Positive Tests for Glycosuria
Private Physicians	1,418	31
Detection Centers	967	32
Hospitals	532	6
Industry	8,700	47
Schools (Public and Parochial)	2,380	32
College and Faculty	139	2
Town Employees	39	2
	<hr/> 14,175	<hr/> 152

cases were newly discovered glycosurias of which 32 cases have already been found to be diabetics. Not all of these have had blood sugars determined as yet. Of the 8,700 examined in industries and noted in the table,

there were 7,400 tested for glycosuria at the U. S. Navy Yard and only eight positives were found. Because these workers were previously screened, the reasons for the low incidence appears evident.

In order to illustrate how a successful venture in diabetes detection and education may be carried out in a specific community, the program in Sanford, a town of 15,000 population, is presented. In addition to the general plan for the whole of York County, in Sanford concerted detection and educational drives were made in industry, the schools, the Diabetes Fair, and with town employees.

The Diabetes Fair served as a diabetes detection and education center which was attended by 1,196 persons. The Fair was held at the Sanford Town Hall, Tuesday and Wednesday, November 18 and 19. There were free tests for sugar in the urine and free chest X-rays. Movies were shown and included "Fred Bauer Waits," "Losing To Win," and "The Story of Wendy Hill." A Blood Bank registry was in evidence and 48 individuals signed up as potential donors.

Blood pressures were also taken by nurses. There was noted a high incidence of 30 cases of elevated blood pressures among 495 persons examined in the age group from 40 to 70. These were varified by their family physicians.

Chest X-rays were taken of 668 people; of these, 46 were found to have suggestive abnormalities which included tuberculosis — 20, non-tubercular — 10, and cardio-vascular — 16.

Exhibits included a Diabetes Detection Booth sponsored by the Community Health Association. Three hundred and ninety-five specimens of urine were tested and of this number 15 were positive for glycosuria. Ten were known diabetics and five unknown diabetics. Other displays included a Heart Exhibit by the Maine Heart Association and one on tuberculosis by the York County Tuberculosis and Health Association. Books for the diabetics were furnished by the Goodall Library. The normal diet was a feature of York County Extension Service, and diabetic diets were displayed by the dietetic department of the Goodall Hospital. The Vocational Rehabilitation Service of Maine was another exhibitor. Diabetes Camps were demonstrated by the Association of Universalist Women of Boston. Drugs of importance in diabetes were depicted in a display by the local pharmacists. The dentists demonstrated the effect of diabetes on the teeth. Insurance literature and many diabetes pamphlets were available. Excellent science displays depicting various aspects of diabetes were conducted by the Sanford High School and St. Ignatius High School.

Nasson College participated with a science display and a dietetic lecture which was one of the highlights

of this exposition. A most interesting dissertation on "Dietetics in Diabetes" was presented by Mrs. Florence Hanson, Assistant Professor of Home Economics of the Dietetics Department at Nasson College, Springvale, Maine.

The detection drive in Sanford, a town with population of 15,000, was a most gratifying and interesting endeavor. All told, there were 3,160 specimens of urine checked for sugar in industry, public and parochial schools, town employees, doctors' offices, drug stores and Goodall Hospital. The industrial and school drives in Sanford were ingeniously arranged. There were five detection teams set up with Mrs. Marilyn Roberts, R.N. and Mrs. Burton Allen, R.N. in charge of this effort. Each team was composed of two nurses and a recorder. Monday, November 17, 1958 was the day picked for this endeavor. Each team was assigned to certain industries and parochial schools. The public schools were done by Miss Laura Tabor, R.N., School Nurse. The number of persons tested by all these various groups was approximately one-fifth of the town's population. The results were quite revealing in Sanford. There were 69 positive tests for glycosuria or 2.1% of the 3,160 tested.

An interesting study was done at Le Mennais College in Alfred, a suburb of Sanford. Here the entire student body and faculty, including the grammar school, high school and college, numbering 139 were checked. Two positives for glycosuria were found in the faculty. All the remainder were negative.

SUMMARY

This paper presents in brief the program carried out by the York County Medical Society during Diabetes Week in 1958 and the results obtained. The purpose is to educate the public concerning diabetes and to stimulate interest in diabetes detection so that the unknown diabetic may be treated early.

Various groups assisted in this endeavor and consisted of doctors, members of the York County Medical Society, nurses (private and Public Health), Community Health Association members and Hi-Y groups, pharmacists, teachers, Health Council members and other persons.

There were 14,175 individuals tested for glycosuria in York County which has a population of 93,541. This suggests that approximately 15 percent of the county population were tested for sugar in the urine. Of the number tested there were 152 positive urine tests or 1.1% with glycosuria. Among these there were 46 known diabetics and at least 32 newly discovered diabetics. Not all of the newly discovered cases of glycosuria have had blood sugar determinations as yet.

122 Main Street, Sanford

Private Practice*

HARRIS M. PLAISTED, C.L.U.**

We use these two words often in our daily lives and then take them for granted. I believe right now, that phrase is headed for trouble and that what we take them to mean is in serious jeopardy.

What is private practice? In the narrow sense it is the medical profession in the form we know it today. In the larger sense it is the entire medical scene including the human and economic forces involved with it. With this definition it affects you and me directly. If private practice goes out the window we find government practice takes its place. I believe in private practice as the best method to solve our medical problems and to steadily improve our health care in the future. If you agree with me then I believe time is running out on that word "private," unless we do something about it ourselves, over and above the call of duty.

Let me read with you a preamble of a Statute of Ontario, Canada, under the heading of The Hospital Services Commission Act, 1957.¹

"Whereas it is in the public interest to establish a plan of hospital care insurance for the people of Ontario universally available to all without regard to age, financial circumstances or condition of health; and whereas it is desirable to extend the powers of the Hospital Services Commission of Ontario in order that it may put such a plan into effect as soon as is practicable";

Does that sound like "private practice" to you? The provincial government has taken over all basic hospitalization with the Dominion Government paying half the cost. In Ontario the Blue Cross Plan administration is being absorbed by the government. In brief, the health insurance business is eliminated from essential hospitalization coverage. The medical services which revolve around the hospital are carefully incorporated into a booklet entitled "Regulations made by the Commission."

Where do we stand at present in the field of private practice? Most of our hospitals are under local private control. Most of our Doctors guide the medical services within the framework of these local organizations. Our economic solution for most of our families is in the form of Voluntary Health Insurance. All three seg-

ments are integral parts of this private practice theme. Their continued existence depends on close cooperation and an understanding of each others participation.

We know that medical care was "nationalized" in England ten years ago but we said, "It can't happen here." Now it appears across our northern border. How come? As usual the public was told that hospital care was so expensive that nobody could pay the bill but the government. With local communities unwilling to carry their proper share of welfare cost, the resulting deficits turned the hospitals towards the government for relief. And the Voluntary Health Insurance business didn't think the issue included them until it was too late. So the crux appears to be the cost as a measuring stick of our capacity to pay the price voluntarily. Health Insurance as we know it must be made to work to the satisfaction of the American people and to their benefit or the voice of dissatisfaction becomes the call for the government to step in.

There are those who believe that greater progress can be made in medical care through the socialized service process. It appears that there are many more who hold to the belief that the voluntary system can do a better job — that our opportunity to exercise a freedom of choice will serve our interests with greater flexibility and at a lower cost.

Every segment of the health insurance business is concerned to avoid government intervention in this field of private practice and to date the public is satisfied with the progress we have made. But, the pinch is on — the costs are constantly rising — and each step up in cost makes the problem more acute for more of our people. Must better health care come about only at a higher cost per family? Not if we can develop better distribution methods to keep pace with our new medical discoveries.

One of our great steps in methods came with the introduction of prepaid service benefit associations — the real beginning of mass voluntary health insurance. These "plans" were established through the efforts of hospital people, hospital trustees, and interested citizens. Designed primarily to collect mounting hospital accounts receivable, it was natural that they would achieve special status in the scheme of things to assist them in furthering this objective. The people reacted favorably and thus Blue Cross was born. The Insurance Companies noting this rapid development came forward with similar plans for protecting people against medical expenses. With so many people to reach with their message of prepayment, these two groups were totally occupied in their endeavor. With tremendous

*Reprinted with permission from the Spring 1959 issue of *The Journal of The American Society of Chartered Life Underwriters*.

**Member, State Committee Health Insurance Council. Special Agent, The Prudential Insurance Company of America, 477 Congress Street, Portland, Maine.

acceptance on the part of the public the numbers grew astoundingly and in recent years almost blanketed the country to reach a figure of over 120 million people. This is about 70 out of every 100 persons in the United States as of the end of 1957.²

TWO GIANTS

Now we have two giants in the field of Voluntary Health Insurance battling each other for the same customer — The American Family. These giants are asking us to take sides and make a choice of methods to solve the twin problems of cost and prepayment. Theoretically the giants have the same goal, but each prefers his own particular route to the destination. Like non-identical twins, they are trying their darndest to look alike, and yet they are quite different. What has this battle to do with the survival of private practice? In my view the continuation of private enterprise in medical care depends on the outcome of this struggle because all the other services are dependent upon the hospital as the hub in the practice of medicine. Witness that the nationalization in England and again in Canada began with the "Hospital Act." In each, the preamble referred to the public interest and to the matter of cost. Therefore, if we can overcome the cost barrier by the voluntary process we have saved private practice. If we lose out in the hospital cost area it is the beginning of the end of the voluntary system as we know it.

My point is why can't these two giants get together when so much is at stake and lead us forward to overcome the rising cost barrier? Surely, if the consequences are seriously studied, this can be done.

Let's look at their differences and see if we can't find our way out.

DIFFERENCES

In the service-benefit associations we find a wide variety of plans, but the general pattern is quite clear. Essentially, these plans are the result of contracts with hospitals and doctors in the area they serve. The individual is a subscriber to the contract for the benefits to be extended by the hospitals and doctors in return for a prepayment plan. Payments from the association are made directly to hospitals and doctors.

The origin of these associations, which are usually called "Blue Cross and Blue Shield," was for the purpose of collecting medical bills through a prepaid plan. They are still serving this purpose.

Because of this service the associations receive a discount or can defer payment on the charges made by hospitals and doctors. The discount becomes a margin for operating expenses of the associations, but it can also become a disappearing margin if the charges by hospitals are increased. These plans have a theoretical escape clause in their contracts: claim expense over revenue will fall back on the hospitals and doctors in the form of reduced payment on incurred bills.

With "plans" established for cities, counties and for whole states, the contracts will naturally vary. But with the founding of the "Blue Cross Association" a standardization is taking place — not only for purposes of uniformity but to serve large industrial clients who have personnel in many parts of the country. All the states, except Indiana, grant the "plans" special charters. This results in a tax saving, as the "plans" escape the premium tax levied by most states on insurance companies. (Indiana requires the "plans" to be chartered under its insurance statutes as insurance companies.)

It is generally agreed that these "plans" showed the way to the American public and to the insurance companies that prepaid medical care was a much wanted product. At the outset they were a Godsend to hospitals whose accounts receivable were growing at a staggering rate.

As our American competitive system began to work, the "plans" became broader and more inclusive and, in fact, more nearly alike. With the sharp increase in hospital costs since World War II, Blue Cross plans have had to make more frequent trips to the legislature to request a boost in rates. This produced various reactions.

More vigorous competition from insurance companies has caused modification to the original system of merely collecting prepaid service fees and paying the hospitals and doctors. While legislatures have seldom turned down requests for increased rates, there have been increasing delays and resistance in granting the requests. (This points up one of the weaknesses in the "plans"; the request for increased rates comes after their costs have gone up because of rising hospital and medical charges.)

The "plans" have grown rapidly through their promise of care to be rendered in the future. This promise is sometimes in the form of all-inclusive coverage at hospitals for the expenses incurred according to their terms. This has the effect of an escalator clause if the hospital costs go up. Hence, today we find the terms of the "plans" changing to put a ceiling on more of their services.

In the desire of the "plans" to grow, they have adopted a full payment scale at the semi-private hospital level and for an extended period of time. Even though the statistics show a shorter average stay over the past 10 years by the hospital patient, dropping from an average of 8.1 days in 1947 to 7.2 days in 1957, these "plans" have suddenly doubled or tripled their contract days of benefits. It is common today to find Blue Cross plans offering "120 days full payment at the semi-private rate and all other routine charges included." This is called "first dollar" and "full care" coverage. In short, their rates are set at collecting the full cost of hospital care and for an extended period.

This would appear to be inviting a constant increase in their costs both from the generally expected hospital increases forecast at about 5 per cent annually

for the indefinite future and from the patient's urge to stay one more day in the hospital for more complete recovery and rest. Then, too, we have the startling medical discoveries which we have come to expect every day. Frequently, they require special techniques and advanced skills and these generally cost more.

If Blue Cross and other "plans" had set rates which took these changes into account, why do some ask for rate increases so frequently? If they have not done so already, when will the "plans" come to grips with the cost of these more recent changes?

Here we find the sharp differences in philosophy emerging in the last five years between the insurance carriers and the Blue Cross — Blue Shield. This is the parting of the roads at a wide angle — yet marked with the same destinations as stated before. Here, then, is the confusion in the prepaid medical care picture.

With the advent of prepayment plans, the use of hospitals became more common and as these plans have grown over the years, more and larger hospitals were needed to meet the demand. So, we see that these plans beget more use as more families are able to benefit from them. With the upgrading of the hospital benefits per day and extension of covered days, can we not expect our past experience to show the way we are headed? The public is quick to see how it works best for them. Over half the income of our general hospitals is estimated to be derived directly from "prepayment" and private insurance plans.

One further point; when the discount granted to the Blue Cross by the hospitals exceeds the value to the hospital of having Blue Cross as a collection agency, then the rest of the public, including private patients in the community, must make up the difference to the hospital. Deficits of many hospitals are paid in whole or in part by voluntary contributions in which all participate.

The insurance companies have increasingly strived in the past decade to come up with plans which will meet the changing needs and the staggering costs. Having, for the most part, dealt with the individual as buyer, they have sought to meet his needs and in a manner which will serve to accomplish the result and at a price within reach. The underlying formula has shown two strong characteristics; the use of a deductible and a co-insurance feature.

DEDUCTIBLE

The deductible is used to avoid the smaller expenses in order to permit inclusion of the much larger bills. Insurance satisfies the greatest economic need when it protects against the large loss which is unlikely to happen, rather than the small loss which is likely to happen. These small losses constitute in the aggregate, the bulk of the financial loss of the entire nation occasioned by accident or sickness. In other words, the "bulk of the financial loss" is diffused over the millions

of families in small amounts, so that the blow falling upon each family is very light. Insurance is bought for the individual's welfare, and the insured should therefore be educated to interpret that welfare in the light of his own family economy as distinguished from the nation's aggregate economy.

CO-INSURANCE

The co-insurance feature takes into account the insured-patient share in the costs. Many costs are still based upon choice, many fees are based on ability to pay. With increased services available, the matter of choice has an increased effect upon the ultimate total expense.

Since the insurance does not assume the whole bill, but requires the insured to assume a part of the total himself, the insured will be disposed to avoid overuse or abuse of medical services, and will cooperate with the insurer in preventing excessive charges for such services.

Through the development of these two features, another change in the plans has been possible. Where, over the years, we have seen a compartment type of plan developed such as a "surgical schedule," now there appeared a broad coverage of "total expense concept," which has become known as "major medical cost insurance."

There is general agreement that still larger medical expenses are ahead of us. That is the price of progress in medicine. More services are being made available and more cost goes with them. Up to this point the "two giants" are similar to each other. They differ on how much more the costs are going to be and how to meet the need of the family.

METHODS

With services the same and costs of services relatively the same, the difference between Blue Cross and the insurance companies boils down to the method to be used in meeting these costs. A struggle over this seems unnecessary, and yet it is this very struggle which may cost us dearly. Why the struggle? I believe it is the result of the different points of origin of these two giants in the field.

Private insurance is a leading form of free enterprise. Blue Cross, on the other hand, grew out of our special treatment of public institutions in our country. The creation of the "plans" was in the form of charity. Charity in our country has been the result of free enterprise not the cause of it. It is difficult to be "practical" with charity. It is equally difficult to separate charity from government.

It would seem that for competitive purposes Blue Cross relegates cost to a secondary position. We do not find it unusual to read their copy saying, "increased benefits are offered with no increase in rates." These headlines commonly come midway between the last annual increase request and the next scheduled appeal.

It is this area of the problem which gives many interested parties concern. Recently an article appeared in the *Weekly Underwriter*³ which reported a study of this problem. It was entitled, "Blue Cross Troubles: A Price of Delusion" by Prof. D. L. MacDonald. It recites an object lesson to be learned "in the danger of operating a business enterprise under a delusion."

The two major difficulties, Prof. MacDonald writes, are the "inability or unwillingness to regard Blue Cross as true insurance, with the resultant failure of plan leaders to accept insurance principles as operational guides . . . and the disassociation from insurance, having caused the public to regard Blue Cross as a public institution which should function under community direction and control . . ." The latter "makes it even more difficult for the plans to adjust their prices to their costs."

Prof. MacDonald pays tribute to Blue Cross for helping "our ill and injured" and for demonstrating that insurance methods could be used to cover the risk of medical and hospital costs. He praises Blue Cross for teaching the people to rely upon themselves rather than upon government to meet these costs and for inspiring the insurance companies "to adopt measures of efficiency and economy which they would have achieved much more gradually if they had had the hospitalization insurance field to themselves."

"The need for Blue Cross remains," he writes. "Strong Blue Cross plans offering efficient programs of protection are vital to our communities, to our insurance industry and to what remains of our spirit of self-reliance. If Blue Cross should wither, calamity will have befallen us. And the calamity will be attributable in a large part to refusal to abandon a delusion."

BASIC PRINCIPLES

What are these basic principles of Insurance? We can afford only to protect ourselves against the large not the normal medical expenses — and we must re-establish our motivations to curb abuse.

For example, most of our insurance plans and Blue Cross plans will still show today small payments being paid very frequently — payments of \$2.00 and \$5.00, \$15.00 and \$25.00. In studies I have made, one out of five charges will be of this size as a result of outpatient hospital care or very minor operations. Wage rates ten years ago would require 20 hours of work to cover \$25.00 — many require only 10 hours of work to cover it today. Simultaneously, the bookkeeping cost of handling this transaction has doubled in the 10 year period. Is it sensible to charge \$50.00 in overall expense to pay a \$25.00 item? Aren't we paying twice for the same thing. In addition, more members of the family work today which reduces the need for this smaller loss to be covered by insurance. We can reduce the cost sharply by direct payment. The same goes for the hospital. They no longer need the collection service for these small bills. They can save thou-

sands of man hours and reams of paper work by making a cash transaction. I believe the Doctors can save time in "form work" by a reasonable application of direct payment.⁴

UNNECESSARY SERVICES AND CHARGES

These two items add considerably to our cost barrier. Let's look at how the Province of Ontario covers the services in their "Regulations."

Sect. 47(2) "An insured person shall be entitled to insured services only for the period of time following admission during which such services are, in the opinion of the Commission, medically necessary."

Then Section 48 reads: "(1) No medical practitioner shall admit or order to be admitted to a hospital any patient unless he is of the opinion that it is medically necessary for the patient to be admitted to the hospital as an in-patient."

"(2) As soon as the attending physician is of the opinion that an insured person under his care no longer requires to remain in hospital for medical reasons, the physician shall order the patient to be discharged from the hospital forthwith."

Does this look like private practice? Doesn't it imply that we have waste in our system of medical service? Don't we need the cooperation of all segments of our medical services to drive this loss down to its minimum point? Can we afford to have others spending our premiums on unnecessary charges? Can we ask others to stop this practice if we don't begin the process ourselves? No one knows what these losses total up to in a year but they know it reaches staggering proportions.

Regulation won't eliminate the abuse. Regulation often turns out to be worse than the evil it seeks to correct. Do you want your doctor to follow a set of rules or his best judgment through training.

EDUCATION — HEALTH INSURANCE COUNCIL

The better method is education. Voluntary Health Insurance is a device that has done much for doctors and hospitals and for the public. But all three must use it properly. An organization has been formed to help in this area of education; the Health Insurance Council. It is their function to educate doctors and hospitals as to the proper use of health insurance and to the dangers to their own freedom that result from improper use. It is difficult to educate against our immediate self-interest. If our policy or subscriber-contract only pays when we are hospitalized we have motivated for hospitalization. We insurance people must write our policies so that we don't motivate abuse — and be strong enough to defend our position and to educate our policyholder on its greater benefit to the American family. With Major Medical we have restored these incentives by a return to insurance principles. The policyholder

will always have an interest in what is happening to him — what service he needs and what it will cost. Some of the service plans have had to follow this lead by adopting deductibles or co-insurance or both.

But this only turns on the red light for the patient — our policyholder. The broad coverage of Major Medical makes the red light look green on the other side — unlimited hospitalization and medical service according to need. How do we motivate doctors and hospitals in the proper use of health insurance? How do we persuade them that their apparent green light is only a signal to show them their responsibility to curb waste is dead ahead. Here, then, we find the Health Insurance Council created for the purpose of establishing communications lines with hospitals and doctors — with State Committees set up to educate the providers of health care in the principles of insurance protection. But we still have to persuade the Blue Cross Commission to join the council in order to complete our function of enlisting all parties in the fight to preserve private practice.

VOLUNTARY SYSTEM

We must be constantly aware that the voluntary system includes all parties to private practice — *not just our part*, whatever that may be. We must learn enough of the problems of the other parts to be able to persuade above our self interest. We must recognize its strength is in change — in experiments for better results. But we can't let these very changes confuse the issue. The principles have stood the test of time. Our challenge is to adapt them to our present needs. This requires working together just as hard as we work for our own individual goals.

TRADITIONS

We rely a great deal on our past traditions — we let go of them reluctantly. Some of these traditions in medical care must be examined in the light of today's developments. For example, the sliding scale of fees by doctors was based on the patients ability to pay. This has been a cardinal principal built on the doctors traditional practice of rendering care regardless of ability to pay. But ability to pay in the old days was cash in the bank. That is very different from the shared bank account of 100 million people designed to help each other to pay. Insurance is not new wealth but shared responsibility and our doctors must take the time to examine this change to be sure they are in step with these new methods aimed at helping both their patient and themselves. The American Medical Association leaders have spoken out on this problem and are constantly working to achieve greater understanding of these changes.

Hospital traditions have changed even more rapidly. Hospitals were established for bed rest and mostly for charity patients. The cost of this service and its personnel were greatly different from today's medical centers. We have moved from convalescent care to intensive treatment and specialized techniques. To the extent we continue to hold on to convalescent care in the vastly more expensive establishments we are adding waste. New professional hospital administrators are replacing trustees in the complicated direction of these varied services. They need all our help in exploring new ways to provide the care. Study is being given to the extension of out patient care as a result of the success of out patient clinics — more care for more people more efficiently. The American College of Hospital Administrators has been a moving force in working to balance all the diverse elements of today's hospital.

The voluntary system means change — it means that the elements are free to develop their own answer to changing needs — it also means that it is dedicated to serve the public interest and to achieve public favor. Any weakness in any one of the elements weakens all parts. Any loss or destruction of any element endangers all segments.

If you think tomorrow is time enough to get at this problem, read with me a report of the General Motors Union Contract effective January 1, 1959.⁵

"Looking ahead to possible inclusion of hospital or medical benefits under Social Security, General Motors has a provision excluding present or former employees (including retirees) who become eligible for such federal benefits, except that if the level of benefits under such a plan is lower than under its program, it may, at its option, provide a plan supplementing federal benefits to the extent of the difference between them."

Private Practice is playing the game of double or nothing right now. We who are closest to the system as participants must educate ourselves to demonstrate clearly that we mean private practice is for the public and not for ourselves. Nobody can do this for us and keep it private. If we believe in private practice now is the time to prove it or before we know it it will be gone.

REFERENCES

1. Regulations made by The Commission under The Hospital Services Commission Act, 1957 (Revisions to July 11, 1958).
2. Health Insurance Council Twelfth Annual Survey.
3. Weekly Underwriter November 27, 1956.
4. U. S. Chamber of Commerce brochure "Major Medical Expense Insurance," February, 1956. E. B. Whittaker's "A Dynamic Group Coverage." Pages 10 and 11.
5. Employee Benefit Plan Review, November 1958.



Hyde Memorial Rehabilitation Hospital, Bath, Maine provides a "Home" for handicapped children who need the combined efforts of doctors, nurses, therapists and teachers to restore them to physical and social independence within the limits of their capabilities.

Crippled Children Can Be Helped

MRS. WARREN F. HAWLEY, JR.*

Hyde Memorial Rehabilitation Hospital which is owned and operated by the Pine Tree Society for Crippled Children and Adults Inc. is a residential center for the rehabilitation of handicapped children and adults. The Pine Tree Society also owns and operates Pine Tree Camp which is designed to offer to crippled children a summer of regulation camp life combined with therapy for physical restoration. In addition, the Society provides rehabilitation for handicapped adults under the Adult Rehabilitation Program which strives for physical restoration along with personal and economic independence.

This article is being published in order that the medical personnel throughout the entire state may understand the facilities and services offered at Hyde Hospital for the rehabilitation of handicapped youngsters.

SERVICES

Under complete and superior medical coverage, a patient may be evaluated, treated and home instruction given. All treatment is prescribed by the attending

orthopedist and carried out by a staff of registered therapists in physical, occupational and speech therapy. The staff of the Bath Memorial Hospital are on call at all times for emergencies and routine medical care. Consultations with appropriate specialists are available on the recommendation of the orthopedist, pediatrician or any member of the attending medical staff. The educational program provides both elementary and secondary schooling, the former under a full time teacher of special education, the latter under qualified tutors. Routine hospital care is an important part of the total program with special attention given to diet, general health and medications. When advisable, psychological evaluation and counseling are available in order that the entire staff may work together to give the greatest service to each patient.

On admission of a patient, his program is planned by the professional staff under the direction of the attending orthopedist. The programs are set up on an individual basis according to the patient's needs and disabilities. The purpose of individual program planning and numerous staff conferences is to provide maximum rehabilitation for each patient not only from a physical standpoint but also from an emotional, social and psychological approach. Teamwork is the key-

*Speech Therapist, Hyde Memorial Rehabilitation Hospital, Bath, Maine.



note of rehabilitation. Isolated treatment can be useless unless the psychological and environmental factors are taken into consideration.

REFERRALS

In general, any child who is mentally trainable and could benefit from one or more of the services provided at the Hyde Memorial Rehabilitation Hospital may be admitted on the written referral of a physician. Referral forms have been forwarded to all members of the Maine Medical Association for their use in referring patients to this unit.

The majority of patients admitted to Hyde Hospital have either orthopedic or neurological conditions such as cerebral palsy, poliomyelitis, osteomyelitis, spina-bifida, Legg-Perthes, arthritis, fractures, amputations, spinal injuries and cast cases. In addition, all types of both organic and functional speech disorders are treated. The organic defects include cerebral palsy, repaired cleft palate and/or hair lip, aphasia and dysarthria; the functional defects include problems of articulation, stuttering and stammering.

Patients are admitted on a trial basis for complete evaluation, after which the treatment program is instituted and carried out under the direction of the attending orthopedist until such time as the patient has achieved maximum progress or reached a plateau. If the possibility of progress is questionable, the patient is given a minimum of thirty days of rehabilitative

This alert, eight-year-old youngster from York County was first admitted at age five with a diagnosis of spina bifida with resultant paraplegia and bilateral club feet. He had had surgical excision of the myelomeningocele when he was a year old and bilateral tenotomies at age four. On admission, he could stand and walk with assistance but had outgrown his braces and had approximately 20-30 degrees flexion contracture of the hips.

Stretching combined with the use of Dennis-Browne splints failed to correct the heel cord tightness and inversion of his feet. Therefore he was discharged for corrective surgery and readmitted for gait training with new, bilateral long-leg braces with a chair back attachment. After four months, he was discharged for a trial at home. He could walk independently on level surfaces although he still needed assistance with his braces.

The next year he was readmitted. He was unable to wear his braces because of pressure sores on the toes, and tight heel cords. When he was able to tolerate braces again, the gait training was resumed with new braces and back support. After attaining maximum improvement for his age level, he was again discharged to his home.

He is currently hospitalized at Hyde Home for the fourth admission. In addition to school, he is receiving bowel and bladder training, and learning to climb stairs and walk on uneven surfaces.

procedures. At the end of this time, he is re-evaluated and recommendations made in accordance with the progress shown.

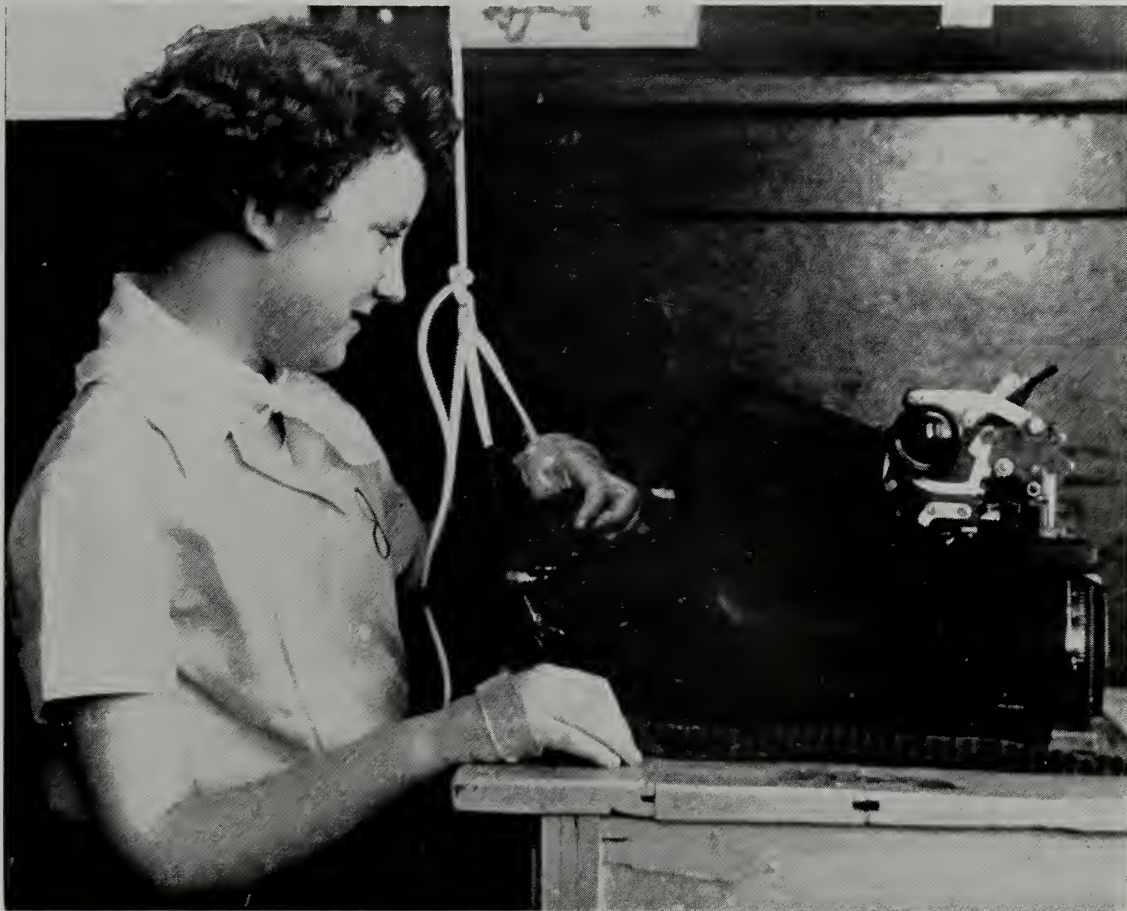
The referring physician receives copies of all orthopedic and pediatric notes while the patient is hospitalized. Upon discharge, the physician receives the orthopedic discharge note as well as summaries from all departments. Recommendations for home care are given both to the family and physician along with advice for follow-up care in the future.

In some instances, the orthopedist and professional staff may feel that the patient would show greater improvement at another type of treatment center. This decision may be based on mental and physical disabilities as well as the emotional and environmental factors. In such cases, the recommendation is sent to the referring physician.

If a diagnosis is questionable the patient may be admitted for evaluation by the orthopedist and Hyde Hospital staff for recommendations and possible referral.

STAFF

All medical policies and procedures are under the direction of the Medical Advisory Committee, headed by Francis A. Winchenbach, M.D., Bath, Medical Advisor, and composed of Hamdi Akar, M.D., Bath, Donald L. Anderson, M.D., Lewiston, Edward G. Asherman, M.D., Portland, Jerome W. Bergman, M.D.,



This young girl from central Maine was admitted at age thirteen with a diagnosis of poliomyelitis, post-respirator. On admission, she had severe spasm in her neck, back and both shoulders, and slight spasm in the hamstrings. Both upper extremities were flail. Her breathing was poor and she had a definite nasal twang to her voice along with some palatal deviation.

The treatment consisted of hotpacks to the affected areas and gentle stretching to all tight structures along with muscle reeducation of involved parts. A shoulder wheel and pulleys were used to increase range of motion and to improve muscle power of her upper extremities. Opponens cuffs were made for her hands to keep the thumbs in proper position. Breathing exercises were given. By means of arm slings, she was taught to feed herself and perform other functional activities. She learned to use an electric typewriter efficiently.

On discharge, her gait was normal and there was no limitation of flexibility. She still had essentially a flail shoulder with severe involvement of both arms and hands. However, she learned to make good functional use of remaining muscle power and was independent in personal care. Her family were carefully instructed in a home exercise program with emphasis placed on allowing the patient to do things for herself. She was discharged at the end of seven months to be followed in the Polio Clinic.

Portland, Lillian H. Brush, Ph.D., Orono, Virginia C. Hamilton, M.D., Bath, A. C. Johnson, M.D., Portland, George L. Maltby, M.D., Portland, Albert W. Moulton Jr., M.D., Portland, Earl L. Wade, D.D.S. Bath, Alice A. S. Whittier, M.D., Portland.

The Medical Staff of Hyde Hospital is made up of doctors from throughout the entire state who give very generously of their services in the interests of rehabilitating handicapped children. In addition to the Medical Advisory Committee, there is both an Attending and Consulting Staff.

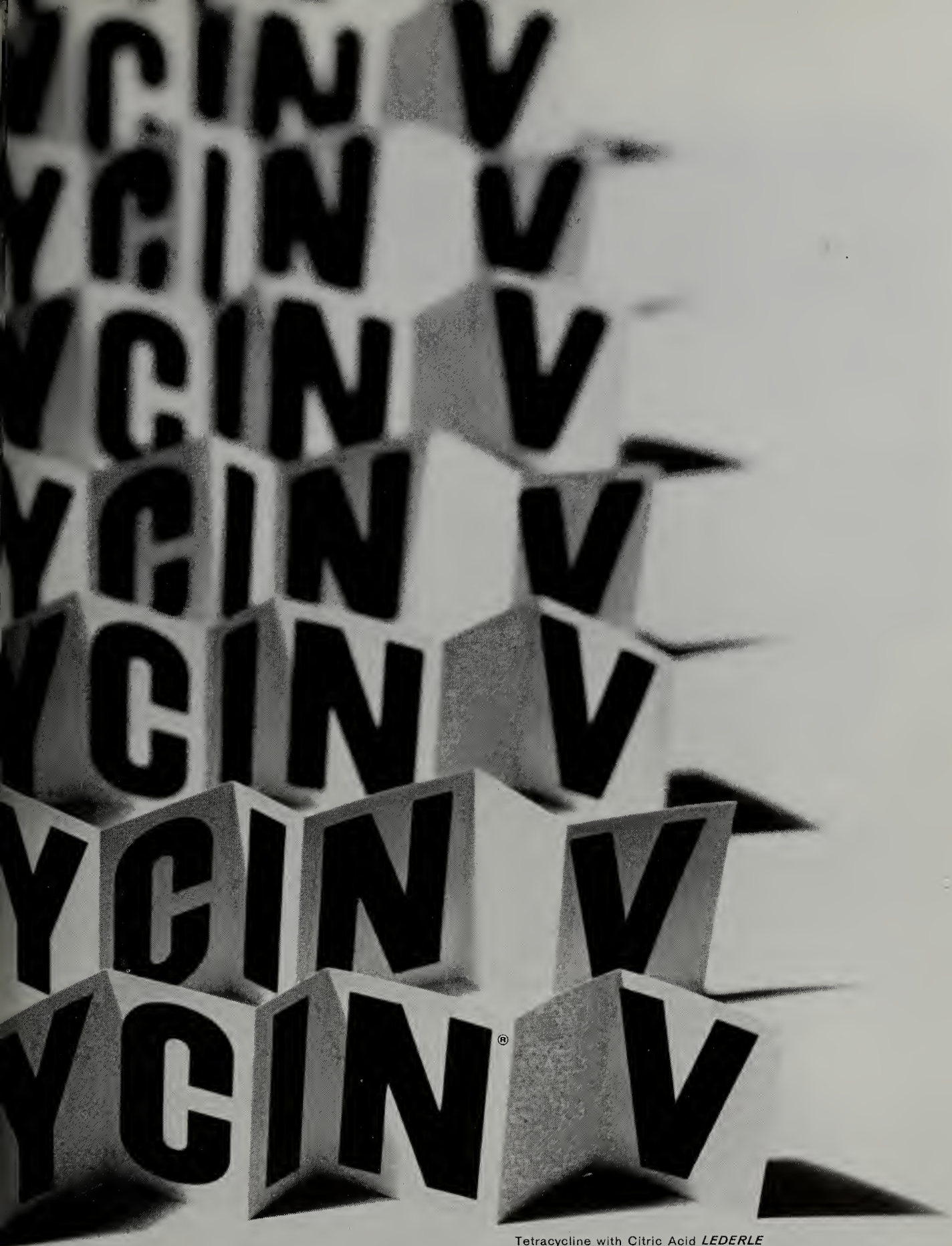
Members of the Attending Staff serve the Hospital on a rotating basis, each one serving two months of each year. The staff of Bath Memorial Hospital are on call for all emergencies and routine medical care. This staff includes Virginia C. Hamilton, M.D., Ham-

di Akar, M.D., Jacob Smith, M.D., M. W. Westermeyer, M.D., R. A. Bettie, M.D., J. F. Dougherty, M.D., Edward L. Kinder Jr., M.D., Joseph I. Smith, M.D., Harry Wilson, M.D., F. A. Winchenbach, M.D., Richard I. Clark, M.D., Robert S. Carson, M.D., Payson B. Jacobson, M.D. and Michael L. Weaver, M.D.

The members of the Orthopedic Staff who supervise the children's programs are Edward G. Asherman, M.D., Portland, Paul M. Beegel, M.D., Auburn, Lawrence Crane, M.D., Portland, John P. Greene, M.D., Lewiston, Leo J. McDermott, M.D., Portland, Carleton H. Rand, M.D., Lewiston, and John A. Woodcock, M.D., Bangor.

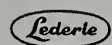
The pediatrician on service does all routine pediatric examinations and also makes recommendations for medications, diet, dental care, eye, ear, nose and throat





Tetracycline with Citric Acid **LEDERLE**

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York





This severely involved cerebral palsy child with above average intelligence was first admitted to Hyde Hospital at age eight having been hospitalized elsewhere for three and a half years. She had been fitted with bilateral long leg braces and crutches but could not walk without slight assistance. She could feed herself but made no attempts at dressing or undressing. Her speech was intelligible but poor.

She received gait training, work in the functional activities of daily living, drills for flexibility of her speaking, musculature and breathing exercises. In addition she attended school daily and made good progress with reading skills. She needed a great deal of encouragement since a fear complex was one of her biggest problems. She was then discharged for a trial period at home with the recommendation that she be readmitted for additional therapy at a later date.

After six months at home, she was readmitted to Hyde Hospital to continue with her schooling and speech work and to improve her walking abilities. She is receiving a concentrated program of gait training, posture correction, use of upper extremities, speech and school. Although she has already overcome a large part of her physical disability, she will need help for a few more years until she has reached maximum improvement within the limits of her physical capabilities.

examinations and laboratory work. Members of the Pediatric Staff are Lloyd W. Bishop, M.D., Portland, Edmund N. Ervin, M.D., Waterville, Richard N. Fallon, M.D., Augusta, Philip G. Good, M.D., Portland, Russell A. Morrisette, M.D., Lewiston, Charles Patton, M.D., Brunswick, Henry C. Thacher, M.D., Auburn, Mary J. Tracy, M.D., Damariscotta and Alice A. S. Whittier, M. D., Portland.

Periodic visits are made to the Hospital by the psychologist, Lillian H. Brush, Ph.D., Orono, to administer intelligence tests and social maturity tests. The results of these tests are then interpreted to the staff members dealing with the children so that they may work more intelligently with them.

Dental services are supplied by Earl L. Wade, D.D.S., Bath and L. E. Buck, D.D., Bath.

Members of the Consulting Staff are available for consultation when requested by any member of the attending staffs. This staff includes specialists in the fields of neurology, neuro-surgery, psychiatry, urology, cardiology, roentgenology, otolaryngology, ophthalmology, surgery and trauma. In addition to those doctors serving on the Medical Advisory Committee, consultations may be obtained with Howard Apollonio, M.D., Rockland, Clair S. Bauman, M.D., Waterville, Frank S. Broggi, M.D., Portland, Harry E. Davis, M.D., Portland, Thomas A. Foster, M.D., Portland, Joseph H. Giesen, M.D., Waterville, Frederick T. Hill, M.D., Waterville, Howard R. Ives, M.D., Portland, Ralf S. Martin, M.D., Portland, Thomas A. Martin, M.D., Portland, Arthur H. McQuillan, M.D., Waterville, William A. Monkhouse, M.D., Portland, Loring W. Pratt,

M.D., Waterville, Carl W. Ruhlin, M.D., Bangor and Philip P. Thompson, Jr., M.D., Portland.

The professional staff of the Hospital includes Mrs. Doris W. Hardy, R.N., Director, two registered physical therapists, one registered occupational therapist, one certified speech therapist, an elementary teacher and registered nurses. In addition, the nursing department includes practical nurses, nurses' aides and attendants. The therapy departments have aides working under the supervision of registered therapists. Volunteers assist in all departments of the Hospital. All medical records and correspondence are under the direction of a medical secretary. The dietary, secretarial, and maintenance department personnel complete the Hospital staff.

FACILITIES

The facilities of Hyde Hospital are many. It has a 51 bed inpatient capacity and an outpatient treatment center. The X-ray and laboratory facilities of the Bath Memorial Hospital are available at all times. The medical treatment room at the Hospital contains all necessary equipment and supplies needed for examinations, treatment of minor illnesses and emergencies. A portable respirator and resuscitator are ready for use when necessary. Complete medical records are maintained on all patients and are always available.

The therapy rooms are the most important items in a rehabilitation center. There are treatment rooms for all therapies with the necessary functional equipment. The Physical Therapy department has relaxa-



Education plays an important role in the life of a handicapped child. At Hyde Home classroom, emphasis is placed not only on educational material but also on group activity, social development and general information.

tion chairs, wheelchairs, parallel bars, standing tables, mats, stationary bicycles, weighted carriages, practice stairs, and walkers which are used for training in head control, sitting balance, standing balance, gait training and independent walking with or without use of apparatus. Braces are obtained for the individual patient when prescribed by the attending orthopedist. Crutches are available for use when needed. Treatment tables are used for exercise programs. Hotpack machines, UV lamp, diathermy and Hood Baker are used under certain prescriptions. The hydrotherapy room has a Hubbard tank and whirlpool.

Occupational Therapy is divided into two categories: functional and recreational. The functional equipment consists of various types of educational toys and games designed to teach grasp, release, coordination, bilateral activities and other activities pertaining to muscle training of the involved parts of the upper extremities. After such training, devices are used to teach the various skills used in dressing, undressing and feeding. These include button boards, practice shoes and table silver which has been modified to conform with muscle power and coordination. In correlation with skills needed for school participation, use of pencils, crayons and scissors is taught. These items, too, are adapted to

the ability of the individual patient. Hand splints of various types are made for individual patients when prescribed by the orthopedist. An electric typewriter with a keyboard shield is used for those patients who are too handicapped to cope with ordinary writing equipment. Practice boards with locks, keys, handles and other ordinary household utensils are used to teach the involved child to use such articles effectively.

On the recreational side, patients are taught many types of arts and crafts activities not only to assist in strengthening involved muscles, but for pleasure, purposeful use of leisure time and in the hope of establishing vocational interests. These include drawing, painting, weaving, stenciling, enameling, jewelry making, copper tooling, leather craft, knitting, sewing, wood-working and wood carving.

Speech Therapy equipment consists of toys and articles designed to teach proper breath control and drooling control and to give flexibility to the muscles of the tongue, lips and jaw. After basic sound production skills have been established, additional material is used in the form of books and games to stimulate speech and increase vocabulary along with reading materials to correlate with school program and drill cards for phonetic use. A tape recorder is used for

permitting children to correct their speech by listening to their own voice, to imitate better speech and to formulate better speaking habits. An audiometer is used for testing hearing on all children.

The classroom furnishings are similar to those of any elementary school but with adaptations for the handicapped child. Desks are of varying sizes and types with removable foot stools. There are lapboards for use with patients confined to a wheelchair and overbed tables for those children who must remain on a stretcher. Work boards are attached to the desks for children with upper extremity involvement to permit tacking down of material used. Special books are available for the child with visual defects. Educational games and workbooks are employed for children who cannot use the ordinary paper and pencil method of preparing assignments. Classroom work is closely linked with occupational and speech therapy to give the patient maximum benefit from a coordinated program.

A workshop and practice kitchen which are part of the Adult Rehabilitation Program are available for use for teenagers when such are demanded.

FINANCES

There are numerous ways of financing a child's treatment at Hyde Hospital but *no child is ever refused because of lack of funds*. Several state, private and national health agencies contribute toward the cost of patient

care. These include Crippled Children's Services, State Hospital Aid, State Hospital Pool Plan, Department of Education, Division of Vocational Rehabilitation, National Foundation and Maine Chapter of Multiple Sclerosis. Various types of hospital insurances are applicable at Hyde Hospital. If there is no sponsoring agency, families are asked to contribute whatever they can afford toward the cost of hospitalization and treatment. This is entirely voluntary. Each child receives the same treatment regardless of financial status.

The Pine Tree Society for Crippled Children and Adults Inc., is Maine's Easter Seal Agency and an affiliate of the National Society for Crippled Children and Adults. Funds from the sale of Easter Seals are used to maintain and operate Hyde Memorial Rehabilitation Hospital and the other programs of the Society. Easter Seal money pays for patient care when no other funds are available.

It is the responsibility of the Director of the Hospital to arrange with the family and/or agency for the cost of rehabilitating a handicapped child. The family doctor or referring physician need be concerned *only* with the medical referral for treatment.

POLICY

In the words of the Medical Advisor, Dr. Winchenbach, the medical policy of Hyde Hospital is very simple: "If you know of a crippled child who needs help, arrange with Hyde Home for him to be admitted.



The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

Voluntary Way Lacking, Say Murray and Dingell

Compulsory national health insurance must be adopted to fill a need because the voluntary system "has failed entirely to reach a third of the people." Senator Murray and Rep. Dingell reach that conclusion in a joint statement explaining the objectives of their new measure. The bill is substantially the same, in its insurance features, as the original Wagner-Murray-Dingell bill of a decade and a half ago. Employers and employees share the cost, with the latter contributing a maximum of \$90 a year for complete health care of themselves and dependents.

In its financing features, the bill does *not* rest on a taxation mechanism, a deliberate omission to heighten chances of its being referred to the House Commerce Committee rather than the Ways and Means Committee. Rep. Dingell is a member of the former group. In the Senate it probably will be handled by the Labor and Public Welfare Committee, on which Senator Murray ranks next to the Chairman.

New Bills Filed; Other Highlights At Capitol

Senator Richard Neuberger (D., Oreg.) filed two bills aimed at intensifying research in cancer. One of them (S. 1162) authorizes \$500 million to National Cancer Institute for a crash program. The other (S. 1163) amends the National Defense Education Act to forgive 50 per cent of the amount of a loan granted

to those who embark upon full-time service in medical research.

Senator Kenneth Keating (R., N.Y.) introduced S. 1169, which allows an income tax credit for premiums paid into medical care plans. As a House member in previous years, he consistently sponsored legislation of this type but it was never enacted.

A plan of this kind, said Senator Keating, would extend health insurance coverage greatly and "would in no way interfere with the traditional private doctor-patient relationship."

Rep. James G. Fulton (R., Pa.) joined a growing circle of House members favoring establishment of a National Science Academy. He introduced H.R. 4997, which envisages training of scientists for federal service in the West Point-Annapolis manner.

In Fewer Words

Congressman Dingell predicts explosive growth of union-controlled medical care programs in the next few years unless his national health insurance bill becomes law.

More Murray-Dingell

National health insurance bills introduced in Senate and House are S. 1056 and H.R. 4498, sponsored by Senator James E. Murray (Mont.) and John D. Dingell

(Mich.), Democrats. Action on this bill is likely to come first — if it comes at all — from Senate Labor and Public Welfare Committee. Senator Murray said it is "wryly amusing" that AMA today is unopposed to federal grants for training of public health personnel, aid to medical research, hospital construction subsidies and several other components of the original Wagner-Murray-Dingell bill of the 1940's.

Global Medical Research Bill Unanimously Backed

Four days of public hearings last week on H.J. Res. 41 produced nothing but hearty support of an expanded U. S. role in worldwide medical research. Dr. Howard A. Rusk, spearhead of the citizens' crusade for enactment of this bill, spoke fervently in its behalf as a measure whose implementation would be a potent weapon against anti-American propaganda.

Two of the President's physicians testified in support: Dr. Paul Dudley White and Dr. I. S. Ravdin. Another who recommended approval was Dr. Ross T. McIntire, who was personal physician to President Roosevelt. Others presenting expert testimony included Dr. Cornelius P. Rhoads, of Sloan-Kettering, and Dr. Sidney Farber and Dr. Frederic J. Stare of Boston, all of whom testify regularly on medical research budgeting.

AMA President Gunnar Gundersen spoke favorably of the bill, but suggested de-emphasis of its authorization of aid for *construction* of research facilities. John T. Connor, president of Merck & Co., also proposed exercise of caution against hidden pitfalls as he endorsed the legislation.

Keogh Bill Out Of Committee, Now Awaits House Action

The Keogh-Simpson bill was favorably approved by the House Ways and Means Committee and the way cleared for early floor action which is expected March 16, 1959. As it emerged from Committee, there were no amendments, thus the bill is identical with the version that passed the House last year and died in the Senate.

The bill would allow the self-employed, including doctors, to set aside 10 per cent of gross adjusted income up to \$2,500 when paid into retirement plans. Maximum set aside in any lifetime would be \$50,000.

One plan under discussion is for the bill to come up for floor action on suspension-of-the-rules day (first and third Mondays). The bill would not be subject to amendment from the floor. Twenty minutes of debate is allowed each side, and a two-thirds vote of those present is necessary for passage. Some House members, particularly the new Congressmen, may want to be heard on the bill before it heads once again for the Senate.

In the Senate, meanwhile, the bill is gaining new

supporters, giving hope that it may be acted on in that body this session.

Red Cross Report Describes Blood Program's Progress

The annual report of the American National Red Cross for 1958 includes the following facts on its blood program:

About 6,000 pints of blood are being collected daily under Red Cross auspices. In the first ten years of this undertaking, more than 22 million pints were donated.

One hundred mobile units operated out of 52 regional blood centers in 1958. Their industrial and business clientele provided four pints out of every five collected.

Bulk of blood donated to ARC went to 3,900 community and governmental hospitals. Much of the remainder was used for fractionation into gamma globulin, serum albumin and fibrinogen.

Doctors Invited To "Feed" Clinical Center

The federal government's big Clinical Center in suburban Bethesda, Md., has just disclosed its clinical research program for 1959, and invited the country's practitioners to refer acceptable patients. By "acceptable" is meant diagnoses that fit into one or more of the 100 clinical investigational areas on the Center's schedule for this year.

A few of these categories are experimental virus therapy of cancer, cardio-respiratory physiology, surgical treatment of congenital heart disease, sarcoidosis, Reiter's syndrome, long-term studies of liver function, use of isotopes in detection of ocular malignancy, etc.

Physicians who would like to receive a copy of the newly revised booklet describing these clinical studies and outline procedures for referral of patients by attending doctors should write to: Director, Clinical Center, National Institutes of Health, Bethesda 14, Maryland.

New Synthetic Analgesic Holds Promise

Extraordinary properties of NIH 7519 as a pain-relieving drug were described recently to the Committee on Drug Addiction and Narcotics of the National Research Council. Belonging to a series of compounds known as the benzomorphans, NIH 7519 has been found to be ten times as potent as morphine in post-surgery patients. Addiction studies are still under way at the Public Health Service hospital in Lexington, Kentucky.

Drs. Everett L. May and Nathan B. Eddy, of the National Institute of Arthritis and Metabolic Diseases, developed this promising coal tar derivative. Smith, Kline & French has been furnishing the drug for

toxicity and analgesic studies at the University of Pennsylvania Hospital in Philadelphia. Release of NIH 7519 is believed to be at least six months distant.

Further Tests Planned For Diagnostic Method

Secretary of HEW Flemming last week announced completion of the first successful field trial of the fluorescent antibody technique in rapid identification of rabies virus in animals. In cooperation with the Florida Board of Health, 144 cases of suspected rabies were put to this relatively new test, which consumes only a few minutes. Comparison of results with standard rabies test with mice produced 100 per cent agreement. Latter method takes two to three weeks.

Presently under way is a field investigation of the method's effectiveness in quick diagnosis of streptococcal infections. This is being conducted in suburban Montgomery County, Maryland. Similar projects are due to be launched soon in Denver and Bismarck, N. D. In the more distant future, efforts will be made to apply the test to toxoplasmosis, syphilis, gonorrhea and other diseases.

Prevalence Of Type B Influenza Virus Noted By Burney

Dr. Leroy E. Burney, Surgeon General of the U. S. Public Health Service, has called attention to some isolated outbreaks of influenza. The causative organism is Type B virus, less to be feared than the so-called Asian flu of 1957-58.

The last major outbreak of Type B in this country was in 1945. To date, minor outbreaks have been reported from Dearborn, Michigan and the metropolitan area of Washington, including suburban counties in Maryland and Virginia.

Powerful Anti-Gout Drug

Surgeon General Leroy E. Burney of the Public Health Service announced that a "happy accident" of medical research has led to the discovery of a powerful new drug for the treatment of gout which is now undergoing clinical trial by scientists at the National Institute of Arthritis and Metabolic Diseases.

The drug itself, zoxazolamine, is not new, Dr. Burney explained. It has been widely used for several years as a muscle relaxant, but its possibilities in the treatment of gout are the result of a chance observation made during studies of the drug's metabolic breakdown in the body.

Dr. J. J. Burns of the National Heart Institute and researchers at the Mount Sinai and Goldwater Memorial Hospitals in New York, under a grant from the National Institute of Arthritis and Metabolic Diseases, were studying the biochemical fate of zoxazolamine in the body when they noticed large amounts of a white crys-

talline compound accumulating in the urine of patients receiving zoxazolamine as a muscle relaxant.

Capitol Hill Bulletins

Senator Thomas J. Dodd (D., Conn.) introduced S. 1025, which brings physicians under social security. He was motivated by requests of individual physicians and notification that some of his state's county medical societies have voted for inclusion. "The great majority of doctors want this coverage," Senator Dodd said on the floor.

Congress Members Inquisitive About Military Medicine

Some members of the House are concerned over the youth of medical officers in military uniform. That is to say, a bit doubtful whether they possess sufficient experience to do the work entrusted to them. This came out recently at hearings conducted by the House Armed Services Committee on a bill extending draft law four more years.

The issue was raised first by Rep. Bob Wilson (R., Calif.) who, incidentally, won his House seat by defeating Dr. Ross T. McIntire, former Surgeon General of the Navy and physician to Franklin D. Roosevelt. In response, Maj. Gen. Silas B. Hays, Army Surgeon General, said a great many Medical Corps recruits have had two to four years of residency training before coming on active duty.

Before the hearing ended, however, the point was re-emphasized by Rep. Toby Morris (D., Okla.).

General Hays repeated his declaration of faith in the competence of volunteers and the subject was dropped. Note: The House went on to pass the draft bill, which makes physicians and dentists subject to involuntary callup until 1963, and Senate action will come in a few weeks.

Revised Edition Of "When You Adopt A Child" Is Published

The U. S. Children's Bureau has just published a revised edition of "When You Adopt a Child." Physicians who are asked for advice by prospective adoptive parents will find this 28-page, illustrated booklet useful for reference purposes. It sells for 14 cents from the Government Printing Office.

Manual And Child Guide Are Published By USPHS

The latest publications of the U. S. Public Health Service are "The Industrial Environment — Its Evaluation and Control" and "The Mentally Retarded Child at Home." The former is a syllabus of short courses given for industrial hygiene engineers and chemists

at Occupational Health Field Headquarters in Cincinnati. Sized 8½ x 11 inches and containing 364 pages, the volume is purchasable (\$2.75) from Superintendent of Documents, Washington 25, D. C.

Mrs. Laura L. Dittman, Children's Bureau specialist in home training of the mentally retarded, wrote the 98-page guide in response to requests from parents and private physicians. It also may be had from the Superintendent of Documents (35 cents).

Amphetamine Inhalants Put On Prescription List

Partly because of complaints by members of Congress, Food and Drug Administration has ruled that nasal inhalers containing basic amphetamine may be purchased by prescription only.

The step was taken as a result of evidence of increasing misuse of inhalers by persons who removed the

wicks and used the drug as a substitute for amphetamine tablets. FDA pointed out that inhalers containing other drugs may still be sold over the counter.

American College of Radiology To Produce Radiation Protection Motion Picture For Physicians

A motion picture illustrating the medical aspects of radiation, including protective measures in diagnostic radiologic examinations, will be distributed soon by the American College of Radiology to the nation's physicians.

Supervising production of the 16 mm., half-hour color film will be a special committee of the American College of Radiology under the chairmanship of Wendell G. Scott, M.D., professor of clinical radiology, Washington University School of Medicine, St. Louis, Missouri.

INTERIM MEETING — M.M.A. HOUSE OF DELEGATES

Sunday, April 5, 1959

The Stowe House

Brunswick, Maine

Dinner at 12:30 P.M. followed by the Business Meeting

Council Meeting at 10:00 A.M.



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Compared to control patients, those receiving Nilevar (brand of norethandrolone) have repeatedly demonstrated more rapid and more complete recovery from serious acute illness and increased comfort and well-being in chronic illness.

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In typical case reports such gratifying comments as these appear:

Underweight —“Appetite considerably increased within one week. Sense of well-being and vigor increased along with increased appetite.”

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The dosage for adults is 20 to 30 mg. daily in single courses no longer than three months. For children the daily dosage is 0.5 mg. per kilogram of body weight, in single courses no longer than three months.

Nilevar is supplied in tablets of 10 mg., ampuls of 25 mg. (1 cc.) and Nilevar Drops of 0.25 mg. per drop.

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SEARLE



DEAN H. FISHER, M.D.
COMMISSIONER

State of Maine

Department of Health and Welfare

Case History Of An Epidemic In A Maine Community

ALTA ASHLEY, M.D.*

Late in December 1958 a large number of cases of infectious disease were reported by the local health officer of a small Waldo County town. On investigation by the District Health Officer it was found that 64 cases had been reported since late in August, the majority of which were reported during December. Many families, particularly the poorer families with many children, were content to diagnose and treat cases without seeking medical help because of the relative mildness of the disease. The rash was fleeting and often absent, complications were few. Cases were reported as scarlet fever, septic sore throat, tonsillitis, and german measles. Most of the german measles cases were not seen by physicians.

Confusing features were that several of the cases of scarlet fever had had the disease in 1954, and contacts of many cases reported as german measles subsequently were diagnosed as scarlet fever, septic sore throat and erysipelas. There were an unusual number of adults among the reported cases. All these factors suggested that a majority of the cases might be types of an unusual exanthema which would require further investigation.

In mid January the Public Health Service was approached to help in the investigation. The fact that the local health officer had records of reported cases of infectious disease and complete records of immunization of all children in the town dating back to 1950, in easy to refer to card files, influenced the Service in making its decision to investigate.

On January 19th, Dr. John Foley and Dr. Fred Tosh, from the Kansas City Field Station of the Public Health Service, visited the area along with the District Health Officer, in hopes of obtaining laboratory specimens from cases of recent origin and to determine the nature of the epidemic.

By January 17th, 103 cases had been reported, four of which were of recent origin. These were selected for investigation. Careful histories of the cases and family contacts were taken. Two of the cases, reported by the family as german measles, had erythematous rashes and throat exudate suggestive of scarlet fever. Tourniquet tests showed marked capillary fragility. Two other cases without rash had tonsillar exudate but did not develop petechiae after tourniquet application. Cultures were taken on all four. The two cases with rash had hemolytic staphylococcus aureus, coagulase positive; one case of tonsillitis showed only streptococcus viridans on culture; the other case had hemolytic staphylococcus aureus, coagulase positive, and hemolytic streptococci in her culture. Although hemolytic streptococci were isolated from only one case, the nature of the rash, the rapid spread through families and the increased capillary fragility exhibited, indicated that the disease was probably caused by hemolytic streptococcal infection, strain undetermined. Further studies will be done to determine the exact nature of the infection: typing of the organism; identification of the toxin produced; follow-up of patients for rheumatic fever and acute nephritis incidence.

Why did such an epidemic develop and involve so large a portion of the population?

The town has a population of approximately 950. There are no resident physicians but the town is served by seven physicians and an osteopath from three nearby towns. The physicians in each of these towns belong to a different medical society so that there is little opportunity for exchange of medical information among the visiting physicians.

The town is not only small but is also a low income community. The highest family income is approximately \$5,000 yearly before taxes. Such incomes, however, are few; most families subsist on incomes far below this. Medical care is sought seldom, cash for drug therapy is limited.

*District Health Officer.

A water system supplies homes in the built up areas of the town with water of high quality; other homes use drilled wells for the most part. There is no sewerage system even in the village. Each householder has his private system, chiefly septic tanks, though some privies still exist.

The school is a frame structure of seven rooms where the 200 students attend from the first grade through high school. Fifty-five students are in high school, the rest in grade school where the pupil population per room ranges from 33 to 40. Rooms, therefore, for grade school students are definitely overcrowded.

Two drinking fountains furnish water for the students and faculty. On the day the school was inspected water pressure in the fountains was turned down so low that a person would need to cover the fountain head with his mouth in order to obtain water.

A hot lunch is served to all from a kitchen in the school basement. Methods of serving and dishwashing were without reproach.

A Bangor dairy supplies milk to the school and to most persons in town. This dairy was not considered as a source of infection because others towns served by the same dairy reported no unusual incidence of disease.

Further inquiry into the time of onset, age distribution and distribution throughout the town revealed that all adult and preschool cases occurred in families where a school-age child had first been taken ill, or among teachers in the school.

Chart 1 shows the reported cases by date of onset. Chart 2 the age distribution of reported cases and Chart 3 school absences from October 15, 1958 through January 16, 1959.

The first case, a preschool child with onset of disease in August, was promptly isolated. He had been exposed to two cases of german measles in the neighborhood. No apparent subsequent cases developed from this source.

Late in November, however, a third grade school child returned to town after a visit to an island community where she had had an unspecified illness. She went to school while convalescing but was not reported

as a case. Shortly after her return to school a classmate came down with fever, sore throat and a rash. This girl had siblings in grades 1 and 2, and 7 and 8. All the children were ill at home late in November and early in December. On their return to school they stated they had been home with "the flu," although one child was desquamating. Shortly after this the teacher of grades 7 and 8 developed scarlet fever.

From charts 1 and 3 one can see that reported cases and school absences took a marked jump in December so that by the time of Christmas vacation school absenteeism had climbed to over 25% in one day, and 27 new cases were reported in one week.

It is apparent from the above discussion that an infectious disease probably of hemolytic streptococcal origin, though possibly due to hemolytic staphylococcus aureus (coagulase positive), was introduced into the school and spread by way of personal contact made easy by overcrowding, and possibly through unsanitary drinking facilities. Spread was greatest in the grades in which children from one large family returned to school after having home diagnosed cases of "flu" associated with desquamation.

That this is a school-centered epidemic is further suggested by the fact that the attack rate was highest among school age children, particularly those of grade school level, as shown in the following table:

ATTACK RATE			
Age Groups	Cases	Estimated Population	Attack Rate
0-4	8	103	7.7
5-9	45	98	45.9
10-14	23	83	27.7
15-19	5	70	7.1
20+	22	595	3.7
	103	950	10.8

What could have been done to stop the spread of this infection? By the time the local health officer and state health services realized that an unusual amount of illness was present in the town, a large number of persons had already been ill. Few cases were seen by physicians and of those seen only a few were reported

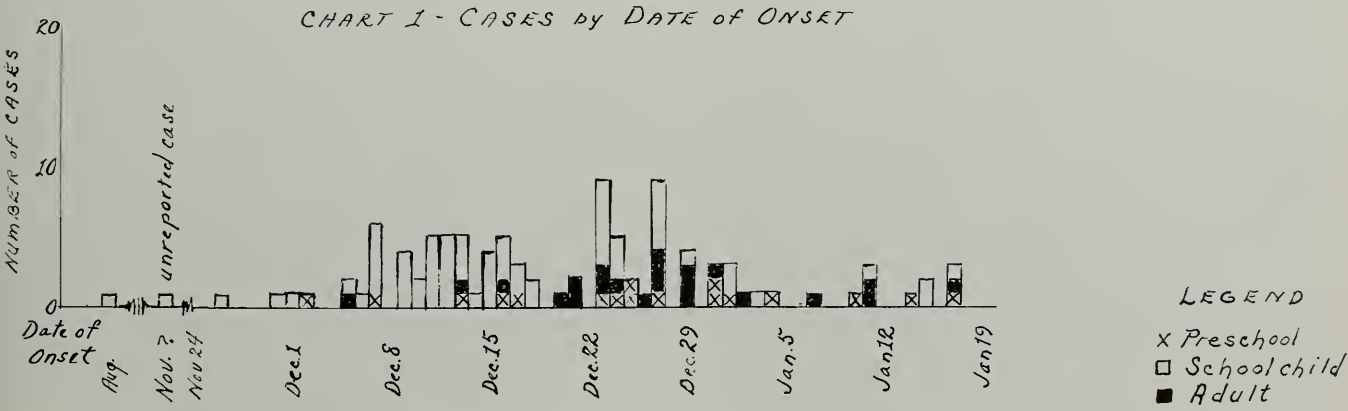
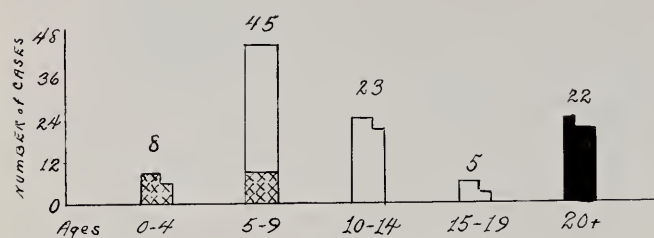


CHART 2 AGE DISTRIBUTION



to the health officer. Only through following up on heresay leads was the health officer able to have reported as many cases as she did. No cultures were obtained on any cases early in the epidemic. It is possible a greater number of cases might have occurred had not some of the physicians used penicillin not only for treatment but for prophylaxis among family contacts.

Had cases been reported promptly to the local health officer by physicians and householders, and had the teachers reported an increase in absenteeism, the local health officer would have been aware of a spreading infection early in the course of the epidemic. The local health officer could then have asked for help from the Bureau of Health in determining if an epidemic was present and what type of infection it was. Appropriate laboratory procedures could have been carried out as aids in diagnosis and prophylactic measures instituted. Mass prophylaxis could have been given to all school children had the presence of hemolytic streptococcus been proven early. Rigid inspection of school children could have been carried out and ill children excluded

from school. The occasion could have been used in the school and P.T.A. as a teaching point in general health education.

What needs to be done now is to follow up those who have been ill to see whether or not any cases of rheumatic fever, rheumatic heart disease, chorea, or nephritis have developed. It is hoped that the organism was not a producer of potent toxin and that the complication rate will be low.

Physicians should not feel that they work alone in the presence of a disease which is unusual in type or incidence. The Bureau of Health through its District Health officers is ready to help physicians in the diagnosis of diseases and mass prophylaxis of selected populations where feasible. Facilities of the Public Health Service are always available to communities. Request for such, however, must be made through the State health services by means of the district health officer.

This episode has shown the need for:

1. Better reporting to local health officer by physicians of infectious diseases seen by them.
2. Better notification of local health officer by householders of infectious diseases not seen by physician.
3. Apprising the local health officer of abnormal school absenteeism by the principal or school supervisor.

Only in this way can the local health officer obtain an accurate picture of infectious disease status of his town and know whether or not outside help is needed for prevention or control of a particular situation.

Chart 3- School Absence
All Grades
10/15/58 to 1/16/59



Necrologies



ADAM P. LEIGHTON, M.D.

1887-1958

Adam P. Leighton, M.D., of Portland, died on December 26, 1958 after a brief illness.

Dr. Leighton was secretary of the Maine Board of Registration for nearly 44 years, serving under 13 governors, eight of whom named him to six-year terms.

Born in Portland on January 23, 1887 to former Mayor Adam P. Leighton and Isadore Mary Butler Leighton, Dr. Leighton fulfilled his political legacy. He was a member and president of the old Common Council of Portland and on the Board of Aldermen from 1915 to 1918. He was elected to fill an unexpired term on the City Council in 1936 and served 19 months, ten as chairman, a post equivalent to that of mayor. In 1939 he was elected for a regular term as city councilor and served as chairman again in 1942.

Dr. Leighton was educated at Holbrook Military Academy, Phillips Exeter Academy, and graduated from the Medical School of Maine at Bowdoin College in 1910. Thereupon he was house doctor at the Maine General Hospital and then did graduate medical work at Vienna and Dublin, Ireland.

In 1913, Dr. Leighton returned to Portland and opened a private maternity hospital which he operated for 32 years. He was consulting gynecologist at Pownal State School (now Pineland Hospital and Training Center) for 30 years and was consultant to Webber Hospital, Biddeford, and St. Andrew's Hospital, Boothbay Harbor. He retired from actual medical practice July 1, 1957.

Dr. Leighton was president of the New England Obstetrical

and Gynecological Society in 1945, president of the Maine Medical Association in 1945-46, past president of the Federation of State Medical Boards of the U. S., and the Portland and Aegis Medical Clubs. He was a diplomate of the American Board of Obstetrics and Gynecology, a member of the American Medical Association, a member of the American Association of Obstetricians and Gynecologists, a founding fellow of the American College of Obstetricians and Gynecologists and a fellow of the International College of Surgeons at Geneva. Dr. Leighton was on the Executive Committee of the National Board of Medical Examiners, a member of the Cumberland County Medical Society, the New Hampshire Surgical Club, the Alpha Kappa Kappa Medical Fraternity and the American Radium Society.

Dr. Leighton became a lieutenant commander during World War I when he served with the U. S. Navy Medical Corps. He was a member of the Williston Congregational Church. A 32nd degree Mason, he was elected illustrious potentate of Kora Temple, Lewiston, Ancient Arabic Order of Mystic Shrine in 1927 and a director of the Jesters in 1929. He was sponsor and founder of the Portland Legion of Honor. He was long a member of the Portland, Cumberland, and Kiwanis Clubs.

Surviving Dr. Leighton are his widow, the former Anna Leahy, R.N., of Worcester, Mass., a daughter by a former marriage, Mrs. Ralph B. Hubbard of Pasadena, California, and two grandchildren.

NAPOLEON BISSON, M.D.

1882-1958

Napoleon Bisson, M.D., of Waterville, died November 5, 1958.

Dr. Bisson, practicing physician and surgeon in Waterville for over 50 years, was a member of the staffs of Thayer and Sisters' Hospitals.

He was born in St. Joseph, P. Q., Canada, March 2, 1882, the son of Francois and Delvina Cloutier Bisson. He came to Waterville at the age of four and attended Waterville Public Schools. He was graduated from Colby College. In 1907, after graduating from Baltimore Medical College, Dr. Bisson did post graduate work in New York and Vienna.

An Honorary Member of the Maine Medical Association and the Kennebec County Medical Society, Dr. Bisson also held membership in the American Medical Association and the American College of Surgeons.

A veteran of World War I, Dr. Bisson served in the Medical Corps. During World War II, he was medical examiner for Kennebec County and the examining physician for the Waterville area draft board.

Dr. Bisson was a member of the Waterville Council, Knights of Columbus, the guard of honor of the Blessed Sacrament and was made a Knight of St. Gregory of the Roman Catholic Church in Portland in 1952. He was also a member of the Bourque-Lanigan Post of the American Legion.

He is survived by one brother, Maurice Bisson, and six sisters, Mrs. Joseph Marquis, Mrs. Charles Sansoucie, Mrs. Olivino Dusty, Mrs. Leda Jolin, Miss Mamie Bisson and Mrs. Dieudonne Fortin, all of Waterville.

THOMAS C. MCCOY, M.D.

1884-1958

Thomas C. McCoy, M.D., of Waterville, died November 9, 1958.

Dr. McCoy was born May 19, 1884 in Mount Pleasant, Delaware, the son of John C. and Lizzie B. McCoy. He moved to New York City as a boy. He was graduated from the College of Physicians and Surgeons at Columbia University in 1905, interned at Williamsburg Hospital, Brooklyn and then did postgraduate work in ear, nose, and throat.

During World War I, he served with the medical corps in England and France. Following the war he returned to New York and in 1920 was appointed to the staff of the Vanderbilt Clinic at Columbia University and of the Lutheran Hospital. In 1921 he was appointed to the Knickerbocker Hospital staff and in 1923 he was named chief of ear, nose, and throat surgery at St. Elizabeth Hospital. He joined the staff of Sisters' Hospital in Waterville in 1931 and during World War II he served as chief of staff.

In 1955 Dr. McCoy became an Honorary Member of the

Maine Medical Association and the Kennebec County Medical Society. He was a past president of the latter group. He was also a member of the New York County Medical Society and the Audubon Medical Society.

He was a Master Mason, a member of the American Legion in New York City and of the Bourque-Lanigan Post, Waterville. He was also a member of the Forest J. Pare Post, Veterans of Foreign Wars of Waterville. He was appointed an examiner for the Civil Aeronautics Administration in 1944, in 1949 was named an airline examiner, and in 1952 was named a fellow in aviation medicine. He was also a member of the Sons of the American Revolution.

Dr. McCoy is survived by his widow, Mrs. Thelma B. McCoy, and one son, John C. McCoy, both of Waterville; two daughters, Mrs. Stanton Herzia, East Granby, Connecticut, and Miss Pauline Adeline McCoy, Waterville; a brother, James D. McCoy, Wilmington, Delaware; and a sister, Miss Adeline C. McCoy, Upland, Pennsylvania.

LESLIE H. HUGGARD, M.D.

1874-1958

Leslie H. Huggard, M.D., of Limestone, died November 22, 1958.

Dr. Huggard had practiced medicine in Limestone since 1905. He was a member of the staffs of the Presque Isle General Hospital and the Cary Memorial Hospital.

He was born in St. John, New Brunswick, Canada, on April 18, 1874, the son of John and Elizabeth (Barnes) Huggard. A graduate of the Fredericton Normal School, Dr. Huggard received his medical degree from the University of Vermont. He did graduate work at the New York Post Graduate Medical Hospital and at the New York Medical Baby's Hospital. From

1936 to 1938 he did graduate work at the Great Oranand Street Hospital for sick children in London, England.

Dr. Huggard was an Honorary Member of the Aroostook County Medical Society and the Maine Medical Association. He also held membership in the American Medical Association and the New England Pediatrics Association.

He is survived by his widow, the former Elizabeth Phair of Limestone; one brother, George Huggard of Staten Island, New York, and two sisters, Mrs. Giles Hutchinson of Worcester, Massachusetts, and Mrs. Milton McCready of Arlington, New Jersey.

County Society Notes

FRANKLIN

January 21, 1959

At the January meeting of the Franklin County Medical Society, new officers were elected as follows:

President, Stanley B. Covert, M.D., Kingfield

Vice-President, Herbert Zikel, M.D., Wilton

Secretary-Treasurer, Paul E. Floyd, M.D., Farmington

Delegate to the Maine Medical Association: Paul A. Fichtner, M.D., Rangeley, and Alternate, Wallace H. Duffy, M.D., Farmington

Board of Censors: Maynard B. Colley, M.D., Wilton, Charles W. Eastman, M.D., Livermore Falls and Harry Brinkman, M.D., Farmington

The Franklin County Medical Society also welcomed a new member, Gaetano E. Fiorica, M.D., Livermore Falls.

PAUL E. FLOYD, M.D.
Secretary

PENOBSCOT

February 17, 1959

The February meeting of the Penobscot County Medical Society was held on February 17 at the Tarratine Club, with John E. Whitworth, M.D. presiding. The Secretary's report was read and accepted. There being no business, the speaker of the evening was introduced by the chairman, Charles D. McEvoy, Jr., M.D. Frank P. Foster, M.D. of the Lahey Clinic, Department of Internal Medicine, presented a talk entitled "Some Opportunities and Responsibilities in Gynecology for the Family Doctor."

The meeting adjourned at 9:30 p.m. Forty-seven members were present.

WARREN G. STROUT, M.D.
Secretary

The following are Penobscot County's representatives to the House of Delegates of the Maine Medical Association:

Delegates: Wilfred I. Butterfield, M.D., Lincoln, Arthur N. Lieberman, M.D., Bangor, Nelson P. Blackburn, M.D., Bangor, Donald E. Bridges, M.D., Bangor and John A. Woodcock, M.D., Bangor

Alternates: Donald F. Macdonald, M.D., Bangor, Bourcard Nesin, M.D., Howland, Richard F. Desjardins, M.D., Millinocket and Edward L. Curran, M.D., Bangor

WASHINGTON

January 30, 1959

A regular meeting of the Washington County Medical Society as guests of the St. Croix Medical Society was held Friday, January 30, 1959 at the Charlotte County Hospital.

Herbert S. Everett, M.D. of St. Stephens, N. B., introduced

COUNTY SOCIETIES

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Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

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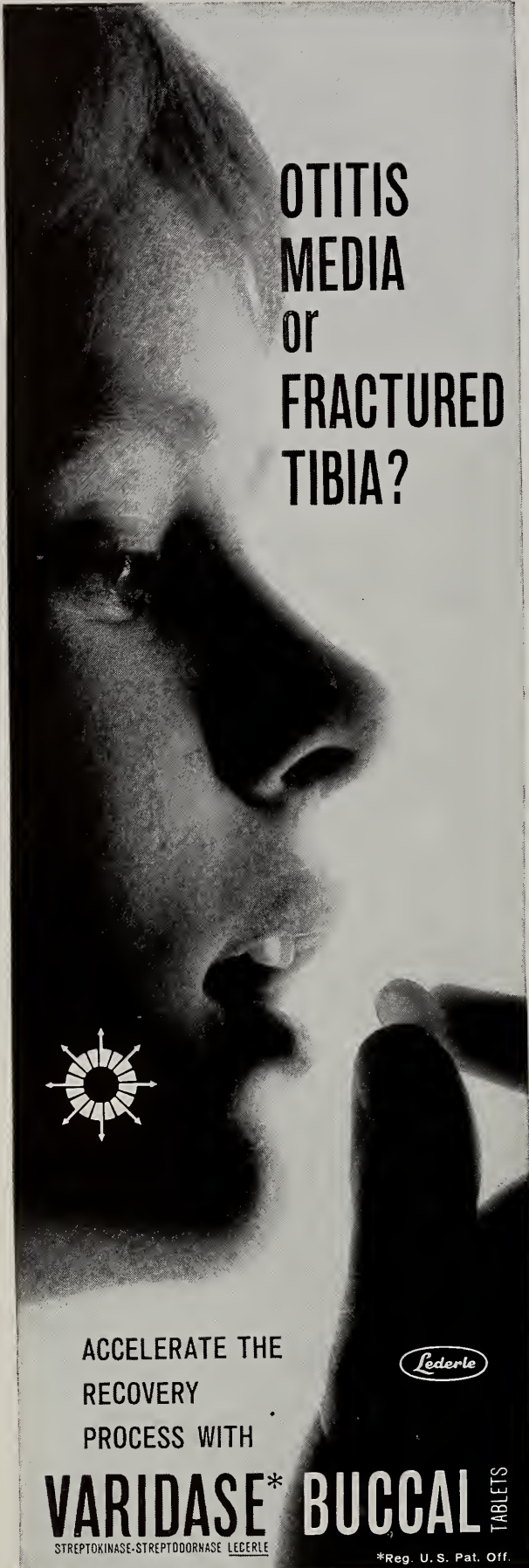
President, Norman E. Cobb, M.D., Belfast
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WASHINGTON

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John Goddin, M.D. of the faculty of Medicine, Dalhousie University. Dr. Goddin spoke on the differential diagnosis of jaundice. He covered the clinical symptoms of the five main types of jaundice and stressed the importance of a careful history which is all important in the drug induced and human serum types. He thought that infectious hepatitis was fairly wide spread with many mild cases undiagnosed. Infectious hepatitis is apparently particularly dangerous to pregnant women.

Dr. Goddin showed slides covering some of the major diagnostic points. He also showed a slide on the treatment of hepatic coma, a clinical entity which is becoming increasingly recognized.

Dr. Everett then introduced Hector MacKinnon of Fredericton, N. B., who spoke on the aims and plans of the National Heart Foundation. A need for such a unit is becoming really necessary because of the tremendous strides in heart surgery and other modes of therapy.

The wives of members were entertained at the home of Mrs. C. W. Brownrigg.

Members and wives attended a buffet dinner at Dover Hill Inn following which they were invited to the home of Dr. and Mrs. Gordon Sears in Woodland, Maine.

KARL V. LARSON, M.D.
Secretary

New Members

CUMBERLAND

Louis G. Bove, M.D., 12 Deering Street, Portland
Anneliese M. Bowman, M.D., Maine Medical Center, Portland
Robert S. Carson, M.D., 11 McKeen Street, Brunswick
George O. Chase, M.D., 144 State Street, Portland
Arthur R. Clemett, M.D., 131 State Street, Portland
Anthony L. D'Andrea, M.D., 868 Broadway, South Portland
Charles H. Patton, Jr., 11 McKeen Street, Brunswick
Hugh P. Robinson, M.D., 29 Deering Street, Portland

FRANKLIN

Gaetano E. Fiorica, M.D., Livermore Falls

WASHINGTON

George N. Nackley, M.D., 1 School Street, Machias

Deceased

ANDROSCOGGIN

Romeo A. Bernard, M.D., 26 Beacon Street, Lewiston, March 3, 1959

LINCOLN-SAGADAHOC

Cyril E. Bousfield, M.D., Woolwich, March 1, 1959
Ardenne A. Stott, M.D., 117 Front Street, Bath, February 9, 1959

"It is an illusion that a man can do effective intensive and uninterrupted intellectual work for more than six hours a day." A. Lawrence Lowell. Quoted by Harvey H. Bundy, *The Atlantic*, March 1957, page 56. Selected by Andrew M. Babey, M.D., Las Cruces, N. M.

News and Notes

Clauson Nominates Four Medical Examiners

Four nominations of county medical examiners were posted January 28, 1959 by Governor Clauson. He renominated Harry Brinkman, M.D., of Farmington and Norman H. Nickerson, M.D., of Greenville. He posted the name of Robert J. Downing, M.D., of Kennebunk to succeed the late J. H. MacDonald, M.D., and that of John J. Pearson, M.D., of Old Town to succeed Wesley McNamara of Lincoln, who resigned.

Richard L. Chasse, M.D. of Waterville replaces the late Dr. Adam P. Leighton of Portland as a member of the Board of Registration of Medicine.

Hospital Infection Institute

Louis Weinstein, M.D., chief of the New England Center Hospital's infectious disease service, was the principal speaker at the hospital infection institute held at Mercy Hospital in Portland on February 10, 1959. More than 250 hospital administrators, nurses, doctors, technicians and other hospital personnel from throughout the state heard explanations for minimizing effects of the infection. Other speakers were Ruth B. Kundsins, M.D., assistant in surgery at Peter Bent Brigham Hospital, Boston, and Richard T. Viguers, administrator of the Pratt Diagnostic Clinic, New England Center Hospital, Boston.

Five Maine Doctors At New York Cancer Meeting

An eastern area medical meeting sponsored by the American Cancer Society to work out professional education techniques regarding cancer among local doctors and medical groups was held on the week end of January 31, 1959. Attending were Eugene E. O'Donnell, M.D., Portland, president of the Maine Medical Association; Joseph E. Porter, M.D., Portland, chief of the Maine Medical Center tumor clinic; Sydney R. Branson, M.D., South Windham, past president of the Academy of Gen-

eral Practice; Isaac M. Webber, M.D., Portland, past president of the Maine Cancer Society; and Dean Fisher, M.D., Augusta, commissioner of the Department of Health and Welfare. Drs. O'Donnell, Porter and Webber are members of the board of directors of the Maine Cancer Society.

John E. Whitworth, M.D., New President

The New England Ear, Nose and Throat Society at a meeting held in early February in Boston, elected John E. Whitworth, M.D., of Bangor, their new president. Dr. Whitworth is president of the Penobscot County Medical Society, a member of the Maine Medical Association, the American Medical Association, the Bangor Medical Club, the American Academy of Ophthalmology and Otolaryngology, the American College of Surgeons, and the Medical Council of Canada.

Public Service By A County Society

The Lincoln-Sagadahoc County Medical Society has made up a schedule for the entire year whereby doctors will be available week ends and holidays in Bath. Such schedules are published in the local newspaper, posted at the Bath Hospital, and at the Bath police station, so that in an emergency, one may call either the hospital or the police station in the event that personal physicians are unable to be reached.

Doctor Hill Again Honored

The American Laryncological, Rhinological and Otolological Society, Inc. paid singular honor to Frederick T. Hill, M.D., of Waterville, by making him *the* guest of honor at their 62nd annual meeting held at the Homestead in Hot Springs, Virginia, on March 10, 11, and 12, 1959.

Announcements

The Third Annual Courses on Industrial Safety Training

The Third Annual Courses on Industrial Safety Training are to be held at Colby College, Waterville, Maine on June 22 through June 26, 1959. Basic and advanced courses will be presented in cooperation with New England's industries, safety societies, the Maine Department of Labor and Industry, Maine State Chamber of Commerce, the Maine Medical Association, and the Maine Association of Insurance Agents.

Thirteenth International Congress on Occupational Health

The 13th International Congress on Occupational Health — first to be held in the Western Hemisphere — will meet in

New York City, July 25 to 29, 1960. The Scientific Program Committee invites submission of papers for presentation at the Congress. For further information write to Dr. Irving R. Tabershaw, Chairman of the Scientific Program Committee, International Congress on Occupational Health, 375 Park Avenue, New York City.

Pineland Hospital And Training Center Pownal, Maine

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1959

March 19	Lecture — Tonsils and Tonsillectomy	11:00 A.M.
March 26	Lecture — Cystinosis	11:00 A.M.
March 19	Clinical Pathological Conference	10:00 A.M.

Symposium on Prevention and Treatment of Athletic Injuries

The University of Rhode Island in Kingston, Rhode Island will be host to the Symposium on Prevention and Treatment of Athletic Injuries on August 17 and 18, 1959. The subjects of the morning session on August 17 will be: Registration and Welcome, Frequency and Nature of Athletic Injuries, Panel on Abdominal, Genito-Urinary and Thoracic Injuries, Insurance Coverage for Athletic Programs, and Injuries of the Head, Spine and Pelvis. The afternoon session will cover Injuries of the Foot, Ankle and Leg, Injuries of the Knee and Thigh, and Principles of Athletic Taping and Wrapping. Topics of the morning session of August 18 will be: Field Examinations and Treatment, Psychosomatic Medicine in Athletics, Injuries of the Upper Extremity, and Physical Basis for the Restriction of Participation in Sports and Conditioning. In the afternoon session speakers will discuss Physical Medicine in the Treatment of Athletic Injuries, Protective Equipment, Prophylactic Inoculations and Diets and there will be a General Question Period.

For further information about this symposium, write to A. A. Savastano, M.D., 205 Waterman St., Providence 6, R. I.

American Board of Obstetrics and Gynecology

The next scheduled examinations (Part II), oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 8 through 19, 1959. Formal notice of the exact time of each candidates examination will be sent him in advance of the examination dates.

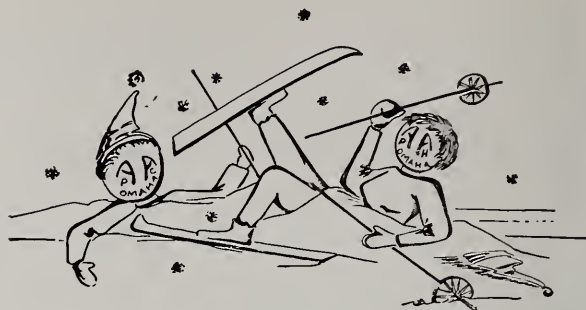
Candidates who participated in the Part I Examinations will be notified of their eligibility for the Part II Examinations as soon as possible.

The deadline date for the receipt of new and reopened applications for the 1960 examinations is August 1, 1959. Candidates may submit their applications at any time before that date.

Robert L. Faulkner, M.D., Secretary-Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

First National Youth Conference on the Atom

The First National Youth Conference on the Atom will take place in Atlantic City, New Jersey, on April 30 and May 1, 1959. The purpose of the conference is to present to the nation's most able high school science students and teachers an authoritative picture of the peaceful atom and to help advance interest in the study of science among youth. This conference will also deal with the role of the atom in medicine. For further information contact the Electric Companies Public Information Program, 2 West 45th Street, New York 36, N.Y.



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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, April, 1959

Number 4

Kernicterus*

H. S. BAAR, M.D., PH.D., M.R.C.P. (London)**

In 1892 *Ballantyne*¹⁰ described at length general dropsy of the fetus and differentiated it from congenital syphilis. He mentioned anemia, erythroblastemia, placental enlargement and the familial occurrence of the disorder. The first description of the pathology of hydrops fetalis was that by *Schridde*⁷⁶ in 1917. Early in this century, reports appeared of the occurrence of numerous and often fatal cases of jaundice in newborn infants in certain families. Later in 1908, familial icterus gravis neonatorum was described in more detail by *Pfannenstiel*⁷¹. *Orth*⁶⁷ was the first to describe cerebral jaundice in such severely jaundiced infants and later *Schmorl*⁷⁵ named the condition "Kernikterus." He is the author of a classical article which describes the morbid anatomy of this disorder. His work was followed by that of *Benecke*¹² and the most recent review on the pathology of kernicterus is that of *Erbslöh*³⁷. The brilliant work of *Landsteiner*, *Wiener* and *Levine* which elucidated the pathogenesis of hemolytic disease of the newborn as a result of blood group incompatibility and isoimmunization and thus the pathogenesis of many cases of kernicterus is generally known.

For many years, kernicterus was considered as a complication which occurs only in hemolytic disease of the newborn due to isoimmunization by the Rh-factor or in the ABO-system or by a rare antigen. In 1945 *Baar*⁸ and in 1947 *Parsons* and *Baar*⁶⁸ reported the first

three examples of anatomically verified kernicterus in which isoimmunization was excluded by all serological methods known at that time. A large series of kernicterus without hemolytic disease of the newborn in premature infants was studied later by *Aidin*^{1,2}.

The histopathological findings in kernicterus of prematurity and those of kernicterus of isoimmunization are identical but the clinical course and the hematological findings are different.

In hemolytic disease of the newborn the jaundice develops rapidly in the first day of life though it is never present at birth. The infant becomes drowsy, feeding reluctantly, has rapid respirations and sometimes attacks of apnea similar to those commonly observed in intracranial birth injury. The drowsiness is often interrupted by a shrill high-pitched cry. Muscle twitchings, opisthotonus, generalized convulsions and coma may occur and be followed by death from collapse within the first half of the first week of life. In such cases, almost invariably, kernicterus is found at the post mortem examination and this is sometimes associated with intracranial hemorrhage. The children have usually an enlarged liver and spleen and apart from the constant but very variable anemia a hemorrhagic diathesis is frequently present. The urine shows urobilinuria, occasionally bilirubinuria, rarely hematuria or hemoglobinuria but very frequently siderinuria. The blood shows an anemia with macrocytosis and hyperchromia, somewhat higher than that physiological in the neonatal period. There is almost invariably a high reticulocyte count, many nucleated red blood cells and a small number of microspherocytes. The osmotic fragility of ery-

*From the Department of Pathology, The Children's Hospital, Birmingham, England.

**Director, Department of Pathology, Pineland Hospital and Training Center, Pownal, Maine.

throcytes is frequently increased. The macrocytosis is mainly or entirely accountable by the increased number of reticulocytes, a condition which *Damashek* calls "pseudomacrocytosis." The serum bilirubin, which is mainly or entirely of the indirect type, is increased and rises rapidly after birth. If the babies survive, the diameter of red cells decreases more rapidly than in normal neonates. The number of white blood cells is usually increased with a polymorphonuclear leucocytosis and appearance of immature myeloid forms. In cases of kernicterus with a severe destruction of erythrocytes methaemalbumen (=albumin linked hematin) may be present, recognizable by an absorption band at 6200A° and two stronger characteristic bands of hemochromogen appearing after the serum had been treated with a reducing agent such as sodium hydrosulfite. This was reported by *Zetterström et al*⁸⁶ and is in agreement with the writer's experience. Such a finding indicates an intravascular hemolysis in addition to the more common intracellular.

It is rare that survivors of kernicterus recover completely and develop normally. Many of them present one or several of the following symptoms: mental deficiency, deafness, blindness (with or without optic atrophy), muscle weakness, hypotonia and choreoathetosis. The first and the last are the most common. Symptoms of Little's disease are rare (*Asher and Schoenell*⁷). High tone deafness is frequent and results from a damage to the nucleus of the 8th nerve on the floor of the 4th ventricle (*Crabtree and Gerrard*²⁷. *Fish and Osborn*³⁹ found among 891 children with congenital perception deafness hemolytic disease of the newborn in 27; twenty of these had various degrees of choreo-athetosis.

The possibility that some cases of mild mental retardation may be a sequela of hemolytic disease of the newborn without kernicterus is a subject of controversy. *Yanet* and *Lieberman*⁸⁵ claimed that in an undifferentiated group of mentally defective children mother-child Rh incompatibility is twice as frequent as in the general population. On the other hand *Capell*²¹ failed to find any significant difference in this regard between mentally defective and normal children. The writer subscribes to the statement of *Capell* that "Rh-incompatibility is concerned in the causation of mental deficiency only so far as it leads to icterus gravis." The opinion is based on the histological examinations of 50 brains from infants with hemolytic disease of the newborn. It has to be borne in mind that infants who later show signs of choreo-athetosis may disclose neurological symptoms in early infancy only on very careful observation.

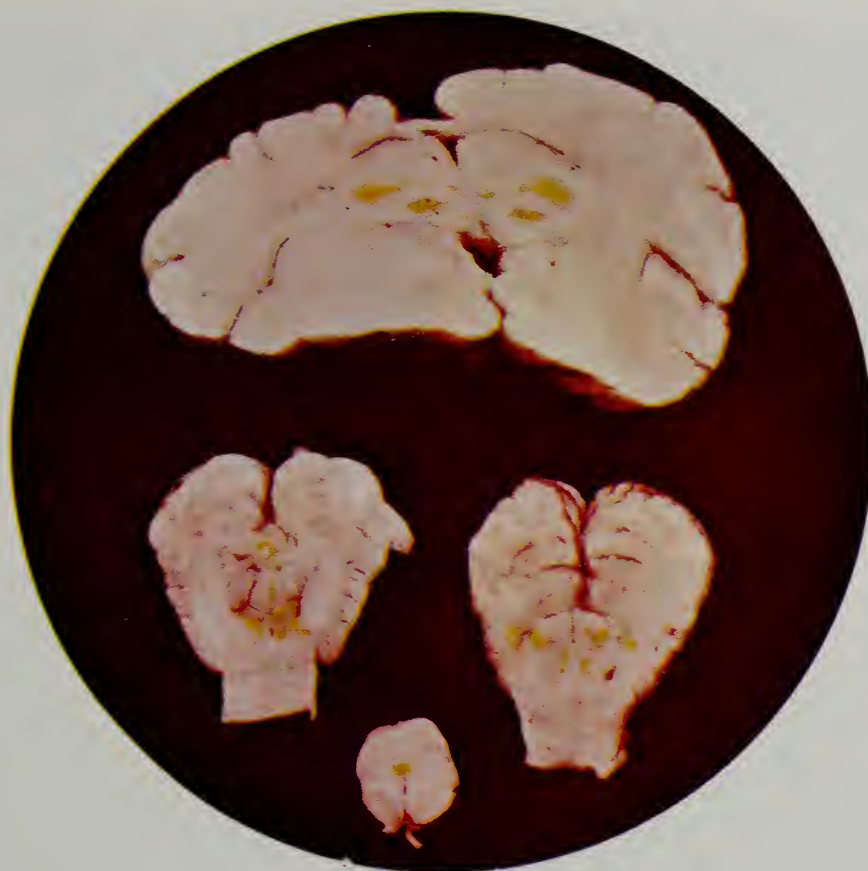
A rare "post-icterus" symptom has been described by *Patterson and Forrester*⁶⁹ namely hyperpyrexia associated with neck retraction and profuse sweating.

Many reports and studies on the "kernicterus of prematurity" have been published since 1945 (*Gerrard*^{42,43}, *Crosse*, *Meyer* and *Gerrard*²⁹, *Zuelzer* and

*Mudgett*⁹, *Bickel* and *Linneweh*¹³, *Lelong*⁶⁶, *Gowan* and *Scott*⁴⁶ m, a.o.). All these infants were markedly immature. The disease takes a different clinical course from that of isoimmunization. The jaundice usually becomes marked on the 4th day of life and severe cerebral symptoms followed by death appear between the 6th and 8th day so that *Aidin et al*^{1,2} called it the "6th day disease." There is no anaemia nor splenomegaly. This disease was very rare 15 years ago. After the observation in 1945 the writer was looking with particular interest for further cases, yet in the next two years he saw only two of them. Some years later the disorder became so common in Birmingham (England) that he had in a single year the opportunity to perform autopsies on 20 babies with kernicterus of prematurity, all from two maternity hospitals.

Another disease in which kernicterus has been observed without isoimmunization or hemolysis is the hereditary disorder described by *Crigler* and *Najjar*²⁶ under the heading "congenital non hemolytic jaundice with kernicterus." Recently *Boon*¹⁷ reported from Singapore 26 examples of kernicterus in full term babies in whom hemolytic disease was absent. Exceptionally kernicterus was observed in erythroblastotic infants of diabetic mothers. *Butler* and *Spector*²⁰ classify kernicterus according to its etiology as follows: (1) blood group incompatibility (2) prematurity, severe infection, congenital malformation and maternal diabetes (3) cerebral damage after birth injury. The writer would exclude the last group because this rare type of cerebral jaundice is in gross appearances and histology different from kernicterus.

As mentioned, the neurohistological findings are identical in all cases of kernicterus whatever their etiology. They were studied in detail by *Schmorl*⁷⁵, *Benecke*¹², *Zimmerman* and *Yanet*^{88,89}, *Greenfield*⁴⁷, *Gilmour*⁴⁴, *Dereymaeker*³⁴, a.o. *Schmorl* described two types of cerebral jaundice. The first type consists of a diffuse yellow discoloration of the brain substance with bilirubin crystals in the blood vessels and opaque yellowish-white foci in the white matter lateral to the basal ganglia mainly in the posterior parts. Microscopically these foci proved to be areas of softening with accumulation of compound granule cells. This type of lesion was seen only once in this writer's material through a very slight yellow diffuse discoloration may be present in otherwise typical kernicterus. Diffuse cerebral jaundice was found in one case of the series described by *Hawksley* and *Lightwood*⁵⁰. The second and much commoner type is characteristically the presence of fairly well demarcated areas of discoloration, golden yellow or sulfur yellow in color. The yellow color fades rapidly and it was believed that the pigment is not bilirubin but mesobilirubin. However, this writer has seen, on two occasions, the pigment to turn green in tissue embedded in paraffin and repeatedly he obtained a positive Gmelin reaction in frozen sections. Recently it was definitely identified as bilirubin by reverse phase chro-



E. B. BRAIN, MEDICAL ARTIST & PHOTOGRAPHER
COLOR PHOTO 1. Gross appearance of kernicterus.

matography (Claireaux et al.²³). The discoloration is usually limited to the grey matter of the basal ganglia, the hypothalamic, medullary, cerebellar ganglia. The spinal cord often shows discoloration of the grey matter, mainly the anterior horns. Occasionally a slight yellow discoloration of the cerebral cortex is seen and the ependymal lining is often yellow. The kernicterus is most marked in the hippocampus and may be limited to the hippocampus (Zischka⁹⁰). The writer has not seen a case of kernicterus in which the cornu ammonis was spared though this has been reported by Dereymaeker³⁴ and by Zollinger⁹¹. Next in frequency is the corpus Luysi, the inferior olive, and the dentate nucleus of the cerebellum. The lentiform nucleus and the nucleus ruber are also usually severely affected. Sometimes the flocculus shows a yellow discoloration and this is the only finding which permits the diagnosis of kernicterus before the brain has been dissected. Examination of the writer's material shows that the involvement of the thalamus and the nucleus caudatus is not uncommon, but this does not appear to have been Schmorl's experience. On the floor of the 4th ventricle the yellow color is in the lateral recesses corresponding to the cochlear and vestibular nuclei much stronger than near to the midline in the area of hypoglossal nuclei which may not be icteric at all. The nuclei affected by kernicterus are not uniformly stained but

the yellow color is patchy in distribution. (Coloured photograph).

In frozen sections, sometimes also in paraffin sections from material which has not been too long in a fixative, there is seen a yellow discoloration of nerve cells with tiny granules and rhombic crystals within and around those cells, many of which show various degrees of necrobiosis. With necrosis of nerve cells extracellular pigment granules become more abundant than intracellular (Fig. 1). The microscopical changes have been divided by Parsons and Baar⁶⁸ into two groups: (1) proliferative (2) degenerative and necrobiotic. The proliferative changes occur not only in kernicterus but also in other forms of hemolytic disease of the newborn and also in pathological conditions other than this disorder. They consist of round cell infiltrates in layers extending deeply beneath the ependyma of the lateral ventricles and in the form of perivascular crescents (Fig. 2). They are identical with the histological appearances of Virchow's "encephalitis interstitialis neonatorum." In premature infants it may be difficult to separate this cellular proliferation from a persistence of the physiological "mantle layer," the pluripotent medulloblast being scarcely distinguishable from a lymphocyte.

The more important degenerative changes occur almost exclusively but not invariably in those areas of the grey matter which show icteric discoloration on

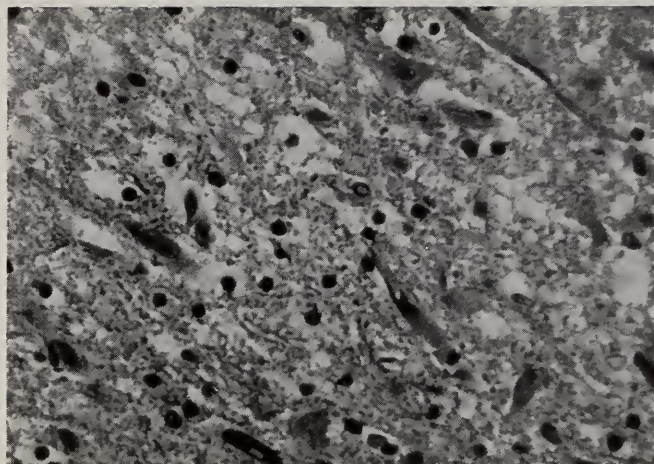


FIG. 1. Abundant extracellular pigment granules in kernicterus.

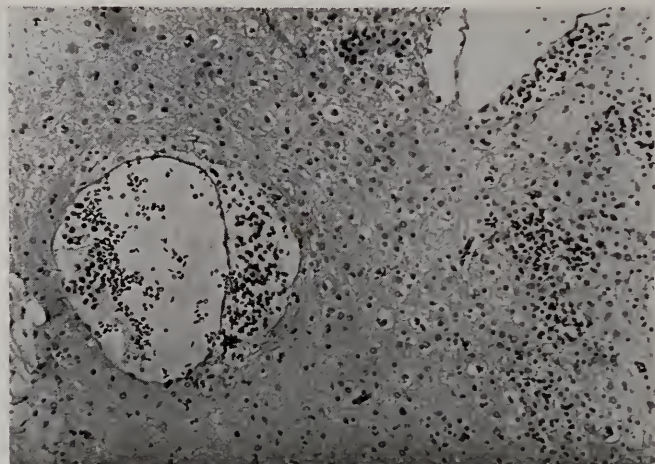


FIG. 2. Perivascular crescent in the brain of kernicterus.

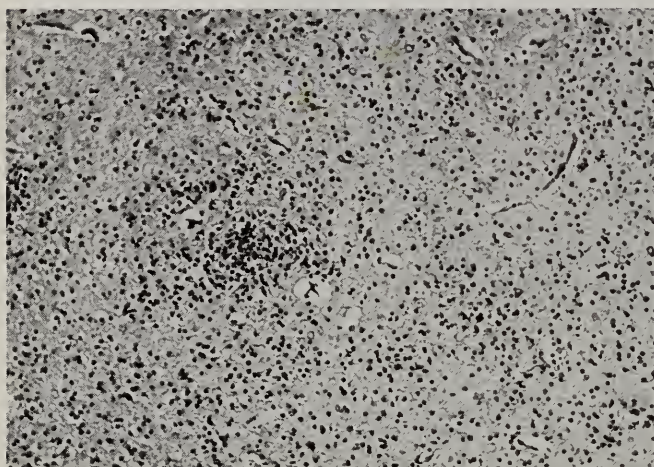


FIG. 3. Focus of softening with glia nodule at the cortico-medullary boundary.

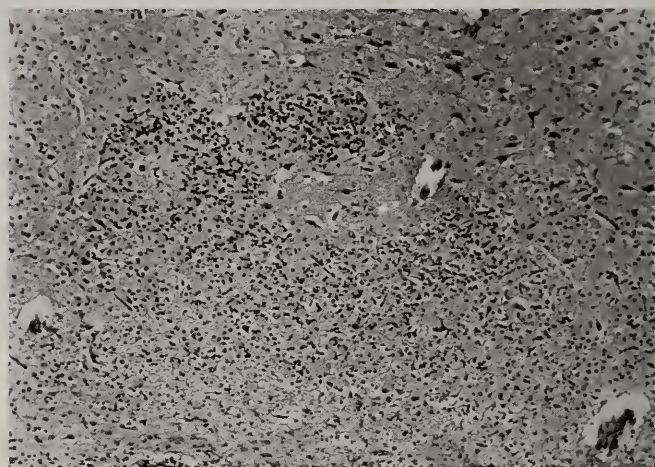


FIG. 4. Foci of softening and glia nodules in white and central grey matter in kernicterus. H. E. x150.

naked eye examination. Occasionally nuclei which were heavily stained at autopsy show no definite damage to ganglion cells on histological examination (*Claireaux*²²). This is not uncommonly seen in the inferior olive and in the dentate nucleus of the cerebellum (*Norman*⁶⁶). Occasionally tiny necrotic foci with clusters of glia cells are seen in the cortex and/or in the white matter (Figs. 3 and 4). They may be recognizable on naked eye examination as pin-head sized opaque spots. The nerve cells show two types of degeneration and necrobiosis. In one the disappearance of Nissl's granules (chromatolysis) is associated with a homogenisation of the cytoplasm which stains pink with H.E. and a nucleus which is excentrically situated and uniformly dark stained. In the other type which may be present side by side with the first and with normal neurons, the whole cell becomes paler, swollen, rounded, the nucleus disappears and finally the nerve cell becomes a ghost recognizable only by its faint outlines. We named this change the "fading away." Occlusion of blood vessels by agglutinated erythrocytes, which *Wiener*⁸⁴ suggested to be the underlying lesion in kernicterus of isoimmunization, was not observed by *Vaughan*⁷⁹ or *Day* and

*Perry*³² nor was it present in any of the 50 brains of hemolytic disease of the newborn which the writer examined histologically. Hyaline thrombi may be present, but this finding is not characteristic of kernicterus.

There is some controversy concerning the occurrence of compound granule cells (fat granule cells) in kernicterus. *Schmorl*⁷⁵ and *Benecke*¹² stress their absence (in type II of cerebral jaundice) and *Greenfield*⁴⁷ stated that the presence of large numbers of fat granule cells militates against the diagnosis kernicterus, but *Gilmour*⁴⁴ and *Zollinger*⁹¹ described the findings of large numbers of fat laden microglia in zones of degeneration and necrosis. The writer's experience is much like that of the earlier workers. He was particularly impressed by the absence or scantiness of fat granule cells in kernicterus when he compared such sections with the necrobiotic changes due to birth injury, thrombosis or encephalitis. In one case only, an infant who died of kernicterus at the age of four weeks, there were large numbers of compound granule cells present. Appreciable numbers of fat laden microglia cells in infants dying of kernicterus in the first few days of life indicate probably always an associated intracranial birth injury.



FIG. 5a. Normal hippocampus. H. E. x10.

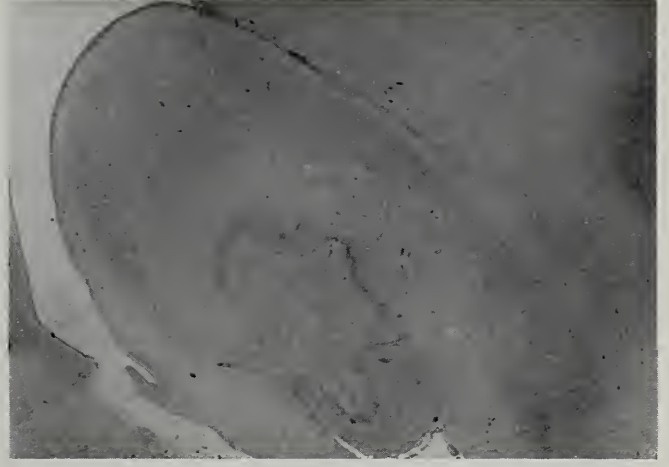


FIG. 5b. Hippocampus in kernicterus (one week old) showing disappearance of nerve cells in the pyramidal layer and fascia dentata. H. E. x10.

Occasionally extensively necrotic brain tissue of an icteric newborn infant is diffusely bile stained. In such cases compound granule cells are abundant. Such cases of cerebral jaundice should not be labelled "kernicterus."

Few cases of "late kernicterus" have been examined histologically (*de Lange*⁵⁸, *Zimmerman* and *Yanet*⁵⁹, *Sobel* and *Zucker*⁷⁷, *Fitz-Gerald*, *Greenfield* and *Koumine*⁴⁰, a.o.). *Crome*^{27,28} reported thorough histological investigations on three cases of mental deficiency after kernicterus and collected 17 examples from the literature. Loss of nerve cells is the common finding. This is particularly impressive in the hippocampus (fig. 5 a and b). Bilateral pallido-Luysial and hippocampal atrophy was comparatively often seen. *Deschamps* and *van Bogaert*³⁵ described disappearance of anterior horn cells and demyelination of posterior funiculi in the spinal cord. Remarkable and exceptional is the case described by *Jervis*⁵⁴ in which kernicterus was the result of isoimmunization in the ABO-system and in which cavitation was observed within the centrum semiovale and a status marmoratus of the putamen. These findings justify a suspicion of a complicating birth injury. Gliosis was seen in only a fraction of cases with late kernicterus. Three examples of late kernicterus were included in the writer's material; gliosis was seen in one (fig. 6).

The pathogenesis of kernicterus was for many years a matter of speculation and controversy. Particularly the question whether bilirubin damages the brain or is deposited in previously damaged brain tissue has been discussed by many authors. *Gerrard*^{42,43} suggested that the low levels of blood sugar in the neonatal period may predispose to kernicterus. However, factual support for this attractive hypothesis has not been obtained.

The jaundice of icterus gravis neonatorum is only in part hemolytic in origin, in part it is hepatic. Evidence of this is provided by the lack of proportion between intensity of blood destruction and severity of icterus (*Baer*^{8a}) and also the occurrence of kernicterus without isoimmunization and pathological blood destruc-

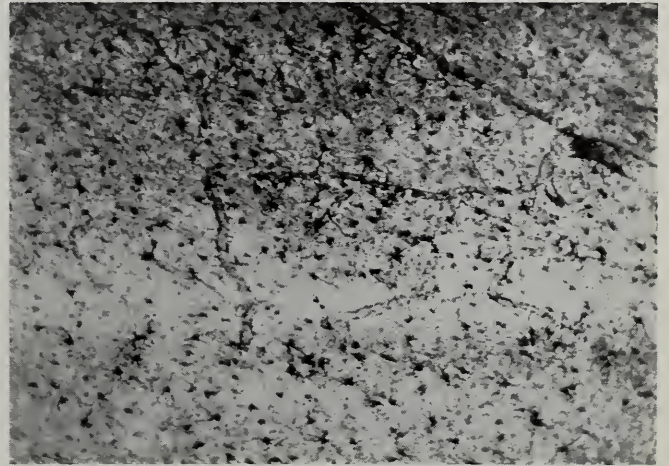


FIG. 6. Gliosis of corpus striatum in old standing kernicterus. Cajal. x 150.

tion. Furthermore, there is a pathological cholesterol partition (*Rothe-Meyer* and *Hickmans*⁷³ and abnormal liver function tests were reported (*Harris*⁴⁹). Histological evidence of liver damage in hemolytic disease of the newborn is given by occasional finding of necrotic changes, but more frequently a damage is demonstrable by a weak Feulgen-reaction of the nuclei, indicating a decrease in the amount of desoxyribonucleic acid. A fixation of antibodies in nerve cells has been postulated by many authors. This, however, is very unlikely. In the writer's unpublished experiments with the inhibition technique Rh-antigens were demonstrable in many tissues, including the liver, but not in the brain. The definite proof that kernicterus is not due to an intracellular antigen-antibody reactions is provided by observations on kernicterus of prematurity, which in naked eye appearances and in histological findings is undistinguishable from that due to isoimmunization. In an appreciable number of such cases the writer found a periarteritis umbilicalis, in a few a septic pulmonary infection. *Zollinger*⁹² also reported frequent umbilical septicaemia in kernicterus of prematurity. In several

cases a relation to the vitamin K medication in the form of synkavit was established (*Laurence*⁵⁹, *Meyer* and *Angus*⁶²). The bilirubin raising effect of synkavit was statistically proven by *Bound* and *Telfer*¹⁸. Among 55 infants who received 30 mg synkavit daily the mean bilirubin level in the serum was on the 5th day of life 15.4 mg/100 ml. and 21 had levels over 18 mg/100 ml. On the other hand in 51 infants who were given only 1 mg. synkavit daily the mean serum bilirubin on the 5th day was 9.7 mg/100 ml. and only two had levels over 18 mg/100 ml. Hemolytic anemia was produced by synkavit in experimental animals and prevented by vitamin E (*Allison*^{5,6}). In some instances of kernicterus of prematurity necrotic foci were found in the liver.

In all cases the comparatively late onset of symptoms shows that apart from the immaturity of the liver there is always an additional postnatal factor. The various factors which contribute to the development of kernicterus have been discussed recently by *Hottinger*⁵¹. In 1945 *Baar*^{8a,8b} compared kernicterus with the encephalopathy which is observed in dogs with an Eck-fistula when they are given meat. In such experiments obviously by-passing of the liver results in a failure of metabolites being detoxicated. He concluded that kernicterus is a form of *hepatogenic encephalopathy*. Similar ideas were advocated one year later by *Pentschew*⁷⁰. In hemolytic disease of the newborn the liver damage is due to Rh-antibodies, in premature infants it is the immaturity of the liver and a variable postnatal noxious agent. Based on experiments of *Nencki* et al.⁶⁵ and *Biedl* and *Winterberg*¹⁴ it was generally believed that ammonia is the toxic agent in liver disease.

The recent brilliant investigations by *Lathe* and his associates^{15,16,23,56,57} have shed new light on the main toxic agent in kernicterus and the mode of its detoxication in the liver. These authors have shown that bilirubin which gives only the indirect van den Bergh reaction is pure bilirubin while the direct one is a conjugated bilirubin namely bilirubin-glucuronide. Only the latter is water soluble and excreted by the kidneys; the indirect bilirubin is almost insoluble in water and is retained in the body. The conjugation of bilirubin with glucuronic acid takes place in the liver with the help of an enzyme which has been named glucuronyl-transferase. It is present in the microsomes of liver cells and catalyses the transfer of glucuronic acid from uridine-diphosphate-glucuronic acid to a suitable aglycone (*Zetterström* and *Ernster*⁸⁷, *Schmid* et al.⁷⁴. *Bowen* and *Waters*¹⁹ assume that the defect in indirect hyperbilirubinaemia is an inhibition or deficiency in diphospho-pyridine-nucleotide (coenzyme I) which is essential for the formation of uridine-diphosphate-glucuronic acid from uridine-diphosphate-glucose. Glucuronyl transferase is defective in neonatal livers and its activity rises slowly after birth. Not conjugated bilirubin is toxic and cerebral jaundice has been produced by injections of indirect bilirubin, but only in

newborn animals. *Küster* and *Kringe*⁵⁵ succeeded in producing pigmentation of the brain by intracarotid injections of high concentrations of bilirubin. The toxic effect of bilirubin on nerve cells is evident from experiments by *Najjar*⁶⁴, *Lathe*^{56,57}, *Waters* et al. *Waters* and *Bowen*⁸⁰, *Bowen* and *Waters*¹⁹ and *Ernster* et al.³⁸. All these authors have shown that high concentrations of bilirubin depress oxygen consumption of brain homogenates by inhibiting the oxydative phosphorylation. The depression 67% with brain of newborn rats but only 22% with that of adult rats. *Najjar*⁶⁴ believes that the depression is due to a competition with cytochrome while *Bowen* and *Waters*¹⁹ attribute it to an interference with DPN (coenzyme I) and TPN (coenzyme II). In agreement with the thesis that the liver is the site of conjugation and thus detoxication of bilirubin is the finding that after hepatectomy only indirect bilirubin is found in the blood. The role of bilirubin in the causation of kernicterus is further evidenced by a good correlation between levels of serum bilirubin in newborn infants and occurrence of kernicterus (*Hsia* et al.⁵²). 18 mg/100 ml. serum is usually considered as the danger limit, but exceptions from this rule are known (*Meyer*⁶¹).

Whether or not the indirect bilirubin toxæmia explains fully kernicterus and hepatogenic encephalopathy is still debatable. Raised levels of ammonia are common in liver disease and the same has been shown by *Gorten* et al.⁴⁵ to be present in newborn infants with icterus gravis and hyperbilirubinaemia of prematurity. Thus damage to the nerve cells by ammonia may be an additional factor in the pathogenesis of kernicterus and would bring this disorder in closer relation to the ammonia intoxication of Eckfistula dogs. Possibly there is an inability to synthesize glutamic acid from ketoglutaric acid and ammonia which reaction is the principal mechanism by which the brain detoxifies ammonia. (*Tower*⁷⁸).

Evidence of a defective blood brain-barrier in the foetus and newborn is controversial and the conclusions depend much on the nature of the substance which was used in the experiments. The accumulation of P32 shown by *Bakay*⁹ may, as this author states, be due to a defective blood-brain barrier or to a high rate of phospholipid synthesis. Experiments with trypan blue gave contradictory results. (*Behnsen*¹¹, *Gröntoft*⁴⁸). On the other hand it is established that the blood-brain barrier of newborn animals is permeable for glutamic acid but not that of adult animals. (*Tower*⁷⁸). Damage to the hemato-encephalic barrier by bilirubin and possibly ammonia is also a factor which has been considered and good evidence of a change in the permeability of the barrier is provided in the paper of *Ernster*, *Herlin* and *Zetterström*³⁸.

The explanation of kernicterus as hepatogenic encephalopathy provides directives for prevention and treatment of this grave disorder:

1. Exchange transfusion which replaces blood rich in

bilirubin and possibly also other toxic compounds is the most effective procedure in prevention of kernicterus (*Lathe*^{56,57}, *Allen and Diamond*⁴). It is effective not only in erythroblastosis foetalis but also in hyperbilirubinaemia of immaturity without anaemia. This is well illustrated by the paper of *Bickel and Linneweh*¹³. From March 1953 to August 1955 these authors lost 25 premature infants as the result of kernicterus verified by autopsy. Since then 16 premature infants were treated with exchange transfusion: two only died and none showed kernicterus at the post mortem examination. After exchange transfusion the level of serum bilirubin still rises but less than in untreated infants.

2. In mothers with high antibody titers induction of labor and cortisone treatment have been recommended. The results are not uniform (*Allen*³, *Dyer et al.*³⁶, *Watson et al.*⁸³, *Hunter*⁵³, *Desforges*³³, *Monnet*⁶³, and many others).
3. *Baar*^{8a} recommended protection of the liver by glucose, glucose and insulin, cholin or methionine. A few encouraging trials were made at the Children's Hospital Birmingham, (England). Since then satisfactory results by this treatment were reported by *Philpott et al.*⁷² in a well controlled series.
4. *Danoff et al.*³¹ reported reduction of indirect bilirubinaemia by oral glucuronic acid (lg. per hour).
5. Reduction of bilirubin in vitro and in vivo after irradiation with a light of a wave-length about 450 millimicrons was found by *Cramer, Perryman and Richards*²⁵ and on this basis treatment with fluorescent light tubes has been recommended. Trials with his type of therapy are still in progress (*Franklin*⁴¹).

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The Team Approach In The Rehabilitation Of A Mentally Retarded Spastic Paraplegia*

DAVID C. HARKINS, B.S., R.P.T.** AND O. D. CARTER, B.S.***

Work should be an essential form of therapy especially when it is prescribed to meet the needs and desires of the individual. It is generally accepted that the prescribing of suitable occupations for patients is as important as the prescription of drugs. Sometimes it may be possible that the latter can be dispensed with if more attention were paid to the former. However, suitable occupation in some form or another is essential to all of us if we are to enjoy good physical and mental health.

Contrary to the folklore that a weak mind is accompanied by a strong back, it may be accompanied by a weak back and it appears that physical defects are more than twice as frequent among the mentally retarded as among the normal³.

Physically handicapped patients make up about one-third of the patients at Pineland Hospital and Training Center. Until fairly recently there had not been a well-equipped and staffed physical therapy service. Most of the patients were left in idleness and with nothing being done to improve their condition.

In order to demonstrate our program clearly, a review of a single patient presenting the problems of both mental retardation and physical handicap has been chosen.

The patient is presently 25 years old; he was admitted to the institution February 10, 1950, by Probate Court through the activities of the Department of Health and Welfare. The reason for his commitment stemmed from community reports that he was becoming a big, strong boy with a "very bad" temper and members of the community were afraid he would injure the children. Fears were aroused by his sex activities, especially when the parents of a child in the town reported that he had molested their boy. This episode prompted the Selectmen of the Town to ask that he be placed in an institution, as he was a "definite menace" to the community at large and they were afraid he might "commit further acts of violence or immorality" on the other children. This led to his eventual commitment and subsequent admission to Pineland Hospital and Training Center. He was diagnosed on February

21, 1951, as an educable retardate, familial, I.Q. 53 on the Stanford-Binet, Form L. The patient attended academic classes for four years where he advanced to the fourth grade. He was well behaved in school and learned to read and write. He also spent considerable time drawing and it appeared that he had some aptitude for this. The patient also took part in our training program; he worked in the Dietary Department for three years where he was reported to be a good worker who followed instructions well and got along with the employees and patients. However, he did keep to himself a great deal.

June 24, 1954, during a routine examination, a comparison of x-ray plates showed a very marked widening of the upper mediastinum. This widening appeared to be lobulated which suggested a mediastinal tumor. On August 23, 1954, he attended the tumor clinic at a General Hospital, and arrangements were made for a therapeutic trial on x-ray radiation. The patient tolerated the treatment without undue reaction and showed some improvement.

The patient had a recurrence of the mediastinal tumor on February 3, 1956, which required additional radiation treatment. X-ray therapy was terminated on February 20, 1956, and a film taken on this date showed considerable regression of the tumor mass. On March 17, 1956, he developed urinary retention and paralysis in both lower extremities with absence of sensory perception to touch, pain, and temperature. A dorsal myelogram revealed a complete block at T₁₂-L₁ necessitating the performance of a dorsal lumbar laminectomy with removal of most of an extradural tumor mass at this level. The pathological diagnosis was established as a malignant thymoma, on the basis of its origin in the chest and histologic structure.

Following surgery, the patient was assigned to the Occupational Therapy Department where he completed a variety of projects, all with good results, such as pattern weaving, knitting, drawing, and painting. He appeared very interested in learning new activities and doing good work. When he was allowed to join the group he would not offer much to the group conversation, he seemed more interested in his project than socialization — usually he seemed withdrawn.

He was referred to Physical Therapy on March 25, 1957. Diagnosis: Spastic paraplegia following surgical removal of a malignant spinal growth. Treatment re-

* From the Pineland Hospital and Training Center, Pownal, Maine, Committee on Physical Rehabilitation.

** Director, Physical Therapy.

*** Assistant Psychologist (Vocational).

quested: Passive exercise and stretching of the lower extremities. Examination at that time showed 30° flexion contracture of the hips; 35° at the knees. Spasticity was severe in the flexor and adductor muscle groups of the legs and the lower limbs were atrophic. Sensation in the lower extremities was diminished, he could tell when his toes were being moved upward and downward, but he could not tell which one. He was also able to perceive passive movements of the ankle and knee joints. He had no bowel control, although he was fairly well regulated on enemas every three days. He did have some urinary control and used manual expression.

There was a problem of maintaining his legs in an extended position. At this time he was not co-operating with the Physical Therapy and Nursing personnel. Skin traction was tried. It was laborious and time consuming to set up, but after being taken out, he would not follow instructions. He tended to sit with the legs flexed for long periods of time with the result of pressure sores on the buttocks and popliteal spaces. He received ultra-violet therapy for four months before this condition cleared up. A strap was constructed to aid in the passive stretching of the spastic lower extremities. However, because the co-operation of the patient could not be gained, all this valuable time and effort were practically lost. Potentially, he was thought to be an excellent candidate for ambulation with braces and crutches. He was seen by an orthopedist, who noted that there had been no further improvement in the spasticity and that we were certainly getting nowhere with the present regime.

On April 9, 1958, a dorsal lumbar laminectomy and anterior rhizotomy were performed. Post-operatively his program was geared to the prevention of decubitus ulcers, institution of weight bearing, active resistive exercises for the upper extremities and the remaining functional abdominal and trunk muscles. He was on a physical therapy schedule twice daily and on June 9, 1958, he stood in the parallel bars with the assistance of posterior leg splints for the first time in over two years.

Through the co-operation of the pathologist, the chief medical technician, and the vocational psychologist, a plan was devised to place the patient in the Anatomical and Clinical Laboratories for training purposes. His duties consisted of washing dishes, bottles and laboratory glassware, cleaning blood pipettes and blood slides, grinding chemicals with mortar and pestle, operating the carriage on a giant microtome, cleaning and sharpening hypo-needles and cleaning and wrapping hypo-syringes for autoclaving. If time permitted, he entered the days work in the daily journal.

At the end of two weeks the pathologist requested a psychological evaluation on the patient because of noted improvement. Members of the nursing staff suggested that he had undergone a personality change —

that he seemed happier, less withdrawn in his attitudes toward himself and toward others.

The patient was administered the Wechsler-Bellevue I; he received a Verbal I.Q. of 66, Performance I.Q. of 91, and a Full Scale I.Q. of 77. The examiner felt that some emotional factors were depressing his potential and that his full scale I.Q. was not indicative of his original endowment. His greatest gain was on verbal tests. The large difference between the verbal I.Q. and the performance I.Q. was not thought to be entirely significant.

His improvement was noted in other areas as well; Physical Therapy reported: "Since the patient has been working in the laboratory his attitude has changed. He has been fitted with orthopedic shoes which will be attached to bilateral long-leg braces. He is capable of doing a 4-point and swing-through gait very well in the parallel bars. He is now ready to progress to a crutch and parallel bar stage preparatory to handling two crutches. Barring any unforeseen accident or illness, prognostically, I have high hopes for this patient's rehabilitation success. He is co-operative and understanding and I feel that, for the first time in a period of two to three years, he really feels that we are interested in him and are doing something for him, especially since we have had him on this work program which was made possible by the co-operation of the various departments."

On November 5, 1958, he received his bilateral long-leg braces and abdominal support and training with brace and crutch management was instituted. Early emphasis was placed upon crutch management drills to establish balance and self-confidence followed by ambulation and retraining in the basic activities of daily living.

We have found the team approach most beneficial and it is our belief that this coordinated program enabled him to accomplish considerable growth. We do not feel that he has reached his potential, nor has he become an expert in compensating for his disabilities; but he has accomplished considerable progress.

Through the combined efforts of the team, a Fund was initiated to solicit enough money to purchase a wheel chair for the patient. By December 19, 1958, this, too, had been accomplished.

At this writing, placement in a Federal vocational training center has been assured. There he will continue with his functional training and, in addition, receive vocational counseling and training in preparation for community employment following his eventual discharge from Pineland Hospital and Training Center.

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Two Years Of Pituitary Treatment In Mongoloids (A Clinical Study)*

EDUARD BLUMBERG, M.D.**

Clemens E. Benda, in his monograph on mongolism and cretinism¹ suggests treating mongolism with extract of pituitary hormones.

A discussion of the basic concepts of Benda about mongolism and his views about the etiology of this developmental disorder will not be included in this paper. His suggestion is the logical conclusion to the hypothesis that mongolism is a polyglandular deficiency in which all glands that depend for their functions upon tropic hormones of the pituitary are at fault; therefore, treatment should start with administration of pituitary growth hormones and of hormones which stimulate the subordinate glands; and in fact, has been done in numerous cases by Benda. We followed this example and administered pituitary gland extract to eleven typically mongoloid patients for a period of two years.

Benda very pointedly observed that we really need pituitary gland extract from immature animals as pituitary glands change their histological structure and the endocrine qualities *after* puberty. We could not obtain the pituitary gland extract from immature animals.*** We had to make use of whole pituitary gland capsules produced from adult animals.

METHOD

We selected twelve patients, one of whom died of an intercurrent disease shortly after starting our project. Eight of the remaining patients were males and three females. As the age limit for admission to Pineland Hospital at that time was five years, our youngest patients were older than recommended by Benda, who suggested the treatment be started shortly after birth. Our youngest patient was six years and nine months old, the oldest eight years, six months. For the first half year they were given one pituitary capsule (one grain) twice a day. After 6 months the dose was increased to one capsule (1 grain) three times daily. In the second year one-half to one grain of thyroid substance was

added, according to the weight of the patient. (No side effects were observed during these two years).

Our observation included weight, height, mental age and I. Q., development of ossification centers and blood chemistries. (Determination of cholesterol and cholesterol-esters, phosphorus, calcium, alkaline phosphatase, basal metabolism, protein-bound iodine and 24-hour radioactive iodine uptake).

Table 1 shows in the *first* column the weight before starting the project; in column 2 the changes after the first year of treatment; in column 3 the changes after the second year of treatment.

TABLE I

		1	2	3
Boys' Weight	C. L. H.	21	31	41 pounds
	P. R.	35	38	41 "
	D. D.	35	50	55 "
	G. F.	37½	40¼	42 "
	S. A.	41	56	58¼ "
	M. W.	46½	60	74 "
	W. G.	53	60	72½ "
	W. T. M.	55	68	75 "
Girls' Weight	G. N.	33½	38	47 "
	R. L. M.	42½	60	74 "
	P. B.	71½	75	80 "

All children gained weight. The average gain was 9½ pounds in the first year and an additional 13½ pounds in the second year.

Figures for comparison with untreated mongoloids were available to us only in a very small number. We compared our figures with the increase of weight in normal children in the same age group, according to a growth table in "Pediatrics" by Holt and McIntosh. Children increased their weight at the age of six about 6½ pounds in one year and about 7 pounds from seven to eight years; that is 13½ pounds within two years, compared with 23 pounds gain in our patients.

Table 2 shows, in the first column, the height before starting the project; in column 2 the changes after the first year of treatment; in column 3 the changes after the second year of treatment.

*From the Department of Research (Peter W. Bowman, M.D., Director), Pineland Hospital and Training Center.

**Senior Psychiatrist.

***Only recently pituitary gland extract from calves is again available.

TABLE II

		1	2	3
Boys' Height	C. L. H.	2' 6"	3' 3½"	3' 8"
	P. R.	3' 3"	3' 6"	3' 7½"
	D. D.	3' 4½"	3' 7"	3' 9"
	G. F.	3' 3"	3' 6¾"	3' 9"
	S. A.	3' 7"	4' 0"	4' ½"
	M. W.	3' 10½"	3' 11"	4' 1½"
	W. G.	3' 7½"	3' 8"	4' 1½"
	W. T. M.	3' 8"	3' 9½"	4' 4"
Girls' Height	G. N.	3' ½"	3' 5"	3' 9"
	R. L. M.	3' 4"	3' 9"	4' 1"
	P. B.	4' ¾"	4' 3"	4' 4"

The children in this study grew on an average of 3½ inches in the first year and 3 inches in the second year; that is, 6½ inches in two years. Height in normal children of the same age group increases in the first year by 2½ inches and by 2½ inches in the second year, or 5 inches in two years.

It is regrettable that there is so little material in the literature for comparison of physical development in mongoloid children. Benda cites only three cases (Table 5 of his book) at the age of 7, but no patient was followed year by year. The average increase of height after an interval of three years in the three patients shows an increase of 6 inches within the three years, whereas we had observed an *average* increase of 6½ inches in two years.

We, ourselves, initiated observations in mongoloid patients for control purposes. However, they were admitted later and not treated with pituitary or thyroid. The short time of observation does not allow any conclusions at this time.

It is quite interesting to state that five of our mongoloid patients showed an average or over average weight when starting this experiment, but none of our patients had reached average height when we started our project. The average in height was reached in two patients after two years of pituitary therapy.

X-ray studies of the carpal bones were performed by Jack Spencer, M.D.* The criteria were: The stage of ossification of the distal epiphysis of the ulna, the appearance of the pisiform bone and of centers in other carpal bones. The rate of bone and epiphyseal growth during these two years was compared with average normal growth. The results are listed in Table 3. It is surprising that no fewer than five patients had a bone age higher than the chronological age when treatment was started. The other six had a lower or, more or less, corresponding age for comparison. Within the two years of treatment, the epiphyseal age increased at an approximately normal rate. Four patients showed a better than average bone growth, three a good average growth, three about normal and only one below normal.

It appears that this change corresponds to good physical development in general. There was no adequate material in the literature for comparison with untreated mongoloid children of this age group.

MENTAL DEVELOPMENT

Whereas the data for physical development are obtained by objective methods and, therefore, beyond speculation, the problems in judging mental progress are somewhat more difficult. In all our patients, the Vineland test was used. Only in a very few cases the Stanford-Binet test could be employed. There is no need of discussing the sources for errors in the Vineland at length.

A turnover in personnel may explain some of our contradictory results. Some data which we obtained during the two years are presented in Table 4.

The patients were arranged in three groups. The first represents the patients who showed continued improvement through the two years. The second includes those patients who showed an improvement which was interrupted by periods of regression or standstill. The third group shows patients who did not respond to therapy, but regressed instead.

Considering the results of the first year of treatment, one will understand that we were extremely enthusiastic because eight children showed considerable increase in SMA and SMQ. One child (RM) even increased mentally about two years within one calendar year, but after the second year of treatment, it was found that five of the patients with original improvement showed regression or standstill. Of course, one has to consider again the sources of error in the Vineland test and an occasional error in judgment by the psychiatric aides at the end of the first year.

After two years of treatment, only two patients showed progress as reflected on the Vineland which is probably better than the average of mongoloid patients in this age group. One of them (SA) showed a corresponding increase of mental age and IQ on Stanford-Binet (1 yr. 9 mos.) in two calendar years. Six patients showed moderate progress of their SMA, but not with steady rise, and three patients had a lower SMA two years after starting the project. M. W. showed progress on the Stanford-Binet, but not on the Vineland. P. B., however, improved only on the Vineland.

There are some rises and falls in the SMA and SMQ which can be explained only by the different personality of the informants. It is difficult to accept that R. M. increased her SMA at a rate of 1 year 11 months within the first year of treatment and fell down one year during the next.

Benda gives graphic illustrations of mental development of mongoloids which show that the curve of mental development in mongoloids differs from the normal curve in the fact that the mongoloid shows almost a standstill from the ninth year and that before the ninth year the curve does not rise in a straight line but shows

*31 Deering Street, Portland, Maine.

TABLE III

NAME	DATE	AGE	EPHYS. AGE	5th Digit Length		Change in 5th Middle Phalanx Indicating Mongolism	OSSIFICATION	Rate of Bone & Epiphyseal Growth Compared with Average normal Height Growth		REMARKS
				Middle	Terminal			Rate of Bone & Epiphyseal Growth Compared with Average normal Height Growth		
								Millimeters		
W. G.	5-8-56	8	6-7	9	9	Marked Deformity	Ulna beginning Pisiform	Average		
	7-30-58	10	9-11	11	10					
C. H.	4-24-56	7	6+	7	6	Marked Deformity	2nd Metacarpal Ulna Ephys not Carpals	Well above normal		Epiphyseal Growth slightly retarded
	7-30-58	9	6-8	10	9					
D. D.	5-8-56	8	6-7	10.5	10	Questionable	Ulna beginning Pisiform present	Normal		
	7-30-58	10	9-10	12	11					
M. W.	5-7-56	8½	10-12	6	8.5	Marked Deformity	Pisiform present Ulna - further growth	Below normal		
	7-30-58	10½	12	7	9					
P. R.	5-9-56	7	More than 6 Less than 10	8.5	9	No change	Ulna just beginning & Pisiform	Slightly less than average		
	7-30-58	9	10-12	9	10					
G. F.	5-7-56	7	5-6	8	8	Questionable	Navicular Ulna absent Pisiform just appearing Ulna	Growth just above normal		Abnormal 4th finger
	7-30-58	9	-6 -10 8-10	9	10					
P. B.	5-8-56	8	10-12	11.5	11	No	Pisiform Pisiform	(12 yrs. unusual growth to start with)		
	7-30-58	10	+12	12	12					
R. M.	4-24-56	7	10	9	9	No	Ulna Pisiform Ulna	Good growth above average		Good growth
	7-30-58	9	Just 10 12	12	12					
J. N.	4-24-56	7	10-12	8	9	Deformed	Ulna present Ulna - further growth	Upper average growth		
	7-30-58	9	12	9	11					
W. M.	5-7-56	8	10-12	11	12	No	Pisiform just present Pisiform good	Good average growth		
	7-30-58	10	12+	12.75	13					
S. A.	5-7-56	7¾	-10	6.5	8	Deformed	Ulna present Ulna	Average		
	7-30-58	9	+10-12	8	9					
K. P.	5-14-56		8-9	Not on film		No	Pisiform not present Ulna present Ulna growth	Control		
	7-30-58		10-11	? 14	? 11-12					

TABLE IV

	1956				1957				1958			
	SMA	SMQ	MA	IQ	SMA	SMQ	MA	IQ	SMA	SMQ	MA	IQ
P.B.	2-0	28	± 2.6		3-0	33	2-9	30	3-4	32	2-7	25
S.A.	2-8	36	2-10	42	3-4	38			4-5	44	3-4	34
RM	1-11	30			3-10	48	2-7	33	2-10	31	2-7	29
GM	1-3	16			2-0	22			2-0	20		
DD	-6	.06			1-10	22			1-6	15		
CH	-4	.04			1-1	13			-8	.07		
PR	1-6	22			1-4	17			1-7	18		
MW	3-4	41	2-7	32	4-0	42	2-11	31	3-4	31	3-1	29+
GF	1-9	24			3-2	38			1-6	16		
WG	1-9	23			1-7	18			1-7	16		
WTM	2-8	35			2-5	26			2-5	23		

notches and changing ratios. The relatively best development seems to occur between seven and nine years. This chronological age corresponds to an average mental age of 2-3 years, according to Benda and according to our figures; and this is just the age where the most striking changes occur on the Vineland Test. When a child becomes tidy, starts to speak, he shows a significant rise on the Vineland test. However, one item performed or one item missed in this test gives a very different SMA. This may also explain our not quite consistent results. We intend to continue our experiment for a prolonged period and we shall see whether we will obtain a continued progress over prolonged years.

Bio-chemical changes were followed in the mongoloid patients during the past two years under pituitary therapy.

The value of calcium, phosphorus and alkaline phosphatase showed no special or characteristic features and may be omitted for a critical review. In order to study thyroid function, we applied the methods of (1) basal metabolism, (2) cholesterol and cholesterol-ester determination, (3) protein-bound iodine, and (4) radioactive iodine uptake.

Before discussing the findings, I would like to give a short comparative review of the actual value of these methods and of some results previously obtained by other investigators.

The basal metabolic rate is probably still the most widely used method, but it is rightly criticized for the many intrinsic and extrinsic factors which may influence the results. The same may be said about the interpretation of figures for cholesterol and cholesterol-esters. The attention of investigators is concentrated on the objective methods of the determination of protein-bound iodine and of radioactive iodine uptake. The differential value of this method is differently estimated. The U. S. Atomic Energy Commission² expressed, in 1955, an opinion that the protein-bound iodine method has to be considered with some misgivings because it is a delicate test and not reliable unless done in special laboratories

by technicians who spend all their time with this technique. The Commission feels that radio-iodine uptake is most reliable. On the other hand, the bio-chemists are more inclined to rely on the protein-bound iodine determination.

The Values for the basal metabolism are considered normal within the limits of 10 \pm . Normal value of total cholesterol is considered to be 150-250 with a ratio of 2 to 1 of cholesterol esters to free cholesterol. Young people have lower values. It is known that hyperthyroidism is associated with *low* values of cholesterol and hypothyroidism related to increased levels of blood cholesterol.

The normal value of radio iodine uptake in euthyroid patients vary between 10 and 35% after 24 hours with the peak between 21 and 25%. Uptake is increased after administration of thyroid stimulating hormones (TSH). Dobyns² claims that the values after TSH intake varied between 16.8 and 63%. On the other hand, it is known that thyroid medication itself produces a decrease of thyroid uptake to about 1/3 of the original value. Therefore, it may be considered a rule that the radioactive iodine uptake is inversely related to thyroid medication.

It can be expected, and is described in literature, that the protein-bound iodine values should run a parallel to the curve of radioactive iodine uptake, but other authors and our own experiments show that this parallelism does not always occur and still less we found a correlation between all four of our tests. How complicated relationships may be, is demonstrated in a paper of Tucker and Keys³ who claim that there are significantly lower protein-bound iodine values in normal middle-aged men than in normal young men and that only in normal middle-aged men a positive linear correlation exists between the protein-bound iodine and the total cholesterol concentration. No such relation exists in normal young men, nor in children, we suppose.

The difficulty of making a diagnosis from plasma-protein-bound iodine is demonstrated in a paper by

TABLE V

Name		Cholesterol	Chol. Esters	Ratio	BMR	PTB	RIU
S.A.	1956	185			+52%	6.1	43%
	1957	190	140	74%	—4%	6.4	38%
	1958	150	101	66%	—9%	6.4	28%
D. D.	1956	225			+25%	5.2	35%
	1957	295	205	68%	+25%	4.8	37-38%
	1958	260	165	66%	+47%	5.6	43%
G.F.	1956	215			+49%	5.0	1%
	1957	190	150	79%	+41%	4.8	51%
	1958	165	134	80%	+37%	7.7	39%
W.G.	1956	290			+17%	5.9	38%
	1957	265	180	69%	+ 0%	12.4	35%
	1958	165	135	84%	+9%	6.7	35%
C.L.H.	1956	215			+59%	6.1	38%
	1957	265	240	92%	+4%	7.8	46%
	1958	240	172	71%	+25%	8.0	26%
M.W.T.	1956	202			+29½%	6.5	41%
	1957	155	135	90%	—10%	5.9	32-27%
	1958	160	85	53%	+31%	5.9	29%
T.R.	1956	295			+13%	5.9	33%
	1957	290	245	84%	—19%	5.3	38%
	1958	130	100	77%	+61%		30%
M.W.	1956	190			+23%	5.0	48%
	1957	215	140	65%	+21%	5.1	46-49%
	1958	210	115	55%	+5%	6.7	35%
P. B.	1956	225			+41%	Not reported	85%
	1957	295	205	170%	—17%	3.9	106-112%
	1958	260	165	63%	+5%	3.9	40%
R.L.M.	1956	182			+29%	6.5	40%
	1957	190	155	81%	+34%	5.9	36%
	1958	200	100	50%	+11%	5.1	20%
J. N.	1956	330			+52%	5.5	39%
	1957	190	165	86%	+68%	6.9	36-47%
	1958	280	108	40%	+88%		21%

Dailey and Skahen⁴. Average ranges of normal are considered to be 4 to 8 mg. A table indicates that the values for normal male and female persons and for various pathological conditions are not basically different and that almost all values vary between the given normal limits. The peak of highest percentage is invariably between 5 and 6 mg., but we find values scattered in all conditions between extreme low and high values so that the conclusion of the authors seems to be justified, namely, that the greatest advantage of this

test is that elevated values of protein-bound iodine make a diagnosis of hyperthyroidism probable and that the determination may also disclose a very few cases of hypothyroidism not suspected clinically and that it may help to appraise thyroid function in patients who have undergone thyroidectomy for non-toxic goiter.

The reports concerning thyroid function in mongoloids are quite contradictory. It is amazing that different authors, using the same method, should obtain such contradictory results. Thus Friedman⁵ and Bellach and

Albaum⁶ state that thyroid function is not significantly affected in mongoloid patients, whereas Hofman-Credner and Zweymuller⁷ have found a uniformly decreased thyroid function in mongoloids, all of them using the radio iodine uptake method.

Evaluating our own results, at a first glance three facts may be stated: (1) the patients were not hypothyroid when the project was started. Surprisingly, the BMR was even elevated at the beginning in all but one patient and the cholesterol values were above normal in only three of the 11 cases (290 up to 300 mgm%). The protein-bound iodine showed the normal initial values between 5 and 6.5 in all cases, and the radio iodine uptake was normal, but near the upper limit in five cases (33 to 39%) and elevated over 40% in five cases (with one extreme value of 85%). One case showed an uptake of 1% which can only be due to the patient's unco-operativeness in taking the iodine capsule as one year later the radio uptake showed a value of 51%; (2) the influence of thyroid medication shows the expected decrease of radio iodine uptake in all but one patient; (3) no effect was seen of whole pituitary gland as a thyriotropic hormone as reflected in our test series.

The cholesterol values show a decrease in only four cases after the first year of administration. The BMR show an insignificant increase in two cases. Radio iodine uptake showed an increase in three cases and the value of protein-bound iodine showed an increase in three of the cases. This is evidently not enough to make the conclusion of a stimulating effect of our pituitary administration on thyroid function. Besides, there is only a sporadic correlation of the four tests and none of the cases show a truly convincing result.

SUMMARY AND DISCUSSION

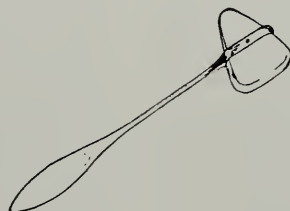
Eleven mongoloid patients between the ages of 6 years 9 months and 8 years 6 months were treated for two years with pituitary extract from adult animals, and with thyroid. Our patients showed good physical development during the period of treatment. The in-

crease in weight was considerably above the average for "normal" children — the increase in height was better than average, too. An influence on mental growth could not be established in our research group. Pituitary gland substance manufactured from adult animals did not show tropic effects on the thyroid gland. There are few data available in literature for comparison with untreated mongoloid children. Further studies, based on large numbers of mongoloid children, should be done in order to have better statistical material about the development of mongoloids. The value of our own research is limited by the small number of patients observed and by lack of adequate control groups. Contrasting with our results Carter and Maley⁸, in a recent publication, gave very encouraging results on mental development in a preliminary report about 26 cases of mongoloids treated in a similar way. The results were highly favorable in infants, in the first year of life. The authors used pituitary extract from calves. Confirmation of the results by prolonged studies would be very welcome. The interpretation of the bio-chemical findings shows that the four methods commonly used; basal metabolism, cholesterol determination, determination of protein-bound iodine and of radioactive iodine uptake are not correlated in mongoloid children. Here, also, further studies are suggested.

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P. O. Box C, Pownal, Maine



Arachnodactyly And Mental Retardation*

HANS MAUTNER, M.D.** AND PAUL PROUDIAN, M.D.***

In most institutions for the mentally retarded, nearly half of the patients are diagnosed as "familial oligophrenia." Of course, there is a long list of neurological disorders which run in families and which are frequently associated with mental retardation which are *not* included in this diagnosis. But familial oligophrenia does embrace two distinct conditions:

One is the so-called "minus variation" of the normal population. Goddard¹ formulated long ago that "mental defect, or a low degree of intelligence is a characteristic of some human stocks, transmitted as truly and accurately as the color of the hair, stature, or any other characteristic." But when a large number of people at random are examined for their I.Q. and plotted on a curve, it does not give exactly the famous Gauss curve of average. There are a number of mentally retarded people who are not explainable by chance alone. A part of this group, especially the dependent patients, are victims of incidental brain damage, which may be caused by trauma, infection or any other type of damage. Another part, however, especially patients of a higher level of intelligence, does not show distinct brain pathology and is, therefore, not so easily differentiated from the minus variation of the whole population. Examination of these patients very often unveils some milder deviations from the norm, comparable to the findings which Lombroso long ago has described as "degenerative signs." We find very often in these patients, for example, abnormal formations of the ears. Also, common is rachischisis or incomplete fusion of the spine, which is often connected with anomalies of the spinal cord. We speak about spinal dysraphism. Benda² has described this group of patients as an entity entirely different from the minus variation type and calls it "oligoencephaly." Other authors relate arachnodactyly or Marfan's syndrome with spinal dysraphism, (Passow³, Wegelius⁴, Wagner⁵, Pino and co-workers⁶).

Mentally retarded patients are, generally, of short stature. They often have anomalies of hands and toes, probably related to spinal cord pathology. Sometimes we find in our mentally retarded population some with abnormally long fingers and toes, resembling the findings in arachnodactyly. The decision, if such patients are correctly diagnosed as Marfan's syndrome, is not eas-

ily made without presence of the typical eye or heart complications.

In 1896 Marfan⁷ described a familial condition with elongated extremities. Achard⁸, some years later, coined the name arachnodactyly. This condition is now believed to be based on an anomaly of the connective tissue and it is often combined with other anomalies, especially of the eye and the heart. Weakness of the suspension apparatus of the lenses causes, fairly frequently, a subluxation of the lens with instability of the lens; milder degrees are sometimes difficult to determine and need special ophthalmoscopic examination with strongly dilated pupils. The findings on the heart are also the result of the abnormal structure of the connective tissue. The most common findings are aneurysm of the aorta and especially often aneurysma-like dilatation of the aortic cusps which are best demonstrated by contrast dye injections. But also other complications, especially arrhythmias of different types have been described. McKusick⁹ called arachnodactyly a disease of connective tissue and gives the following chart of the symptoms in the circulatory system:

- I. *Aorta.*
 - 1) Dilatation of aortic ring
 - 2) Dilatation of ascending aorta
 - 3) Dissecting aneurysm
 - 4) Combination of 1, 2 or 3
 - 5) Coarctation
 - 6) Patent ductus arteriosus
- II. *Pulmonary artery.*
 - 1) Dilatation (including some cases of so-called congenital idiopathic dilatation.)
 - 2) Dissecting aneurysm
 - 3) Microscopic alteration of media
- III. *Septal defects.*
 - 1) Atrial defects
 - 2) Tetralogy of Fallot
- IV. *Valvular abnormalities.*
 - 1) Stretching and secculation of the aortic cusps
 - 2) Other gross and microscopic changes
 - 3) Subacute bacterial endocarditis
- V. *Dysrhythmias and conductive defects.*
- VI. *Pectus excavatum.*

In the long list of publications about this syndrome, the mental level of the patient is not always mentioned, but a high percentage of them are described as mentally retarded. There is no question that this syndrome may be observed in patients of average intelligence, but a

*From the Department of Research (Peter W. Bowman, M.D., Director) Pineland Hospital and Training Center, Pownal, Maine.

**Clinical Director, em.

***Senior Physician.

number of these patients belong in the group of familial oligo-encephalics.

In many publications it has been stressed that eye and heart complications are not always present. We may assume, however, that abnormal findings in the length of the extremities, especially fingers and toes and abnormal relation of the length of the bones and increased arm span belong often to this syndrome. Two case histories from the patients of Pineland Hospital are presented:

1. P. R., born September 8, 1944, admitted to Pineland Hospital on October 6, 1958. The parents are of at least normal intelligence, but over-protective. They both are tall, but shorter than P. The paternal grandfather was for a time a patient at a State Hospital and died of heart disease; also the maternal grandfather died of heart disease at the age of 73. There are four siblings; one sister born in 1942 has an I.Q. of 93. Of the three younger siblings, one has been tested and has an I.Q. of 104. Both parents are High School graduates.

The mother had a nervous breakdown during her pregnancy with P. The father, at that time, was in the war. P. was born with a birthweight of 7 lbs. 8 oz. He cut his first tooth at seven months of age, walked at four years only. Speech is inarticulated even now. He had measles at six years of age, chicken-pox and whooping cough at eight years. He went to school and was socially promoted to the seventh grade, but is unable to do first-grade work. P. was tested at the age of 13 years and 10 months and had a mental age of 4 years 11 months, giving him an I.Q. of 37. P. is a very tall, extremely thin, youngster with very long toes and fingers. The musculature is very weak. When ordered to stand up, he obeys, but sits down immediately again. There is a severe asymmetry of the thorax which is extremely flat on the right lower part. He is 74 inches tall; his arm span is 78 inches; upper length from crown to umbilicus is 27 inches; length of his legs is 37½ inches. There is no demonstrable anomaly of the lenses.

The heart is not enlarged. Normal silhouette on x-ray examination. No murmur is present. Pulse in horizontal position is 80 and when standing is 102. Blood pressure 120/60 on both sides and 125/80, respectively. The electrocardiogram report reads:

Ventricular rate 110; auricular rate 110. PR interval 0.16 sec.; QRS 0.08 sec. T is upright in all standard leads. Lead I shows an S wave. There is a Q present in Lead III. All deflections are downward directed in Lead AVR. T is upright in Lead AVL and Lead AVF. The QRS complex is W-shaped and of low amplitude in Lead VI. T is upright in all precordial leads. Transitional zone is at V2.

Impression: Sinus tachycardia, right axis deviation, semi-verticle electrical position of the heart.*

Blood examination: Hb. 14 gm. Rh negative. RBC 4½ millions, WBC 11,850, with 20% lymphocytes and 9% monocytes. He has been treated before admission with Compazine spansules 150 milligrams daily. Biopsy of the skin from the outer aspect of the right thigh gave the following results:

The epidermis shows short epidermal pegs and the dermal papillae are shallow, suggesting a stretched epidermis; otherwise, the epidermis is normal. The colageneous fibres of the cutis vera are normal in appearance and show normal straining properties (H. E., van Gieson, Mallory, Laidlaw, and P.A.S.). The only abnormality is in the vascularity. Arterioles and capillaries are conspicuous, wide, and many show swollen endothelial cells and a slightly, but definitely, increased perivascular cellularity. The cells are all of the histiocytic type; inflammatory cells are absent.**

2. R. H. was born on May 10, 1913 and admitted to Pineland Hospital on October 30, 1923. The mother was considered mentally retarded, had five illegitimate children. The four half-siblings of R. are described as mentally normal. The mother died at the age of 39 of tuberculosis. R. is a very tall, thin woman, with an I.Q. of 14. She is 68 inches tall, her arm span is 72 inches, four inches more than her length. The upper half (crown to umbilicus) is 27 inches. Length of legs is 33 inches. She has very long fingers and toes, especially long first toes. She has a cleft of the posterior part of the palate with the corresponding speech defect. The heart is not enlarged. Although there is a loud, long, soft systolic murmur over the aorta, the silhouette on x-ray is normal and does not suggest an open ductus arteriosus. The blood pressure is 215/120, without a difference between right and left; inguinal pulsation is well palpable. Coarctation, therefore, is not present. The interpretation of the electro-cardiogram reveals a

Ventricular rate and auricular rate of 80. T is upright in Leads I, II, and III. There are P waves present in Lead I that cannot be outlined in Leads II and III. All deflections are downward directed in Lead AVR, T is inverted in Lead AVL, there is a small Q present in Lead AVL, T is upright in AVF. There are small P waves present in Lead AVF. T is upright in all precordial leads. Transitional zone is at V3. Impression: Essentially within normal limits. Missing P waves in Leads II and III.*

*David Davidson, M.D., Portland, Maine.

R. is anemic. Hb. 8 gm.; RBC 3.1 millions, WBC 10,000 with 14% lymphocytes and 2% monocytes. Histological examination of the skin:

The epidermis shows rather short pegs and the dermal papillae are shallow and in some places absent. The collagenous fibres of the cutis vera are normal in appearance and in staining properties (H. E., van Gieson, Laidlaw, P.A.S.). The elastic fibres appear also normal. The arterioles and capillaries are rather wide and an occasional one is surrounded by an increased number of histiocytes.**

SUMMARY

Marfan's syndrome, arachnodactyly, is a condition with extremely long "long bones." It is believed to be based on a defect of the connective tissue and is often combined with weakness of the suspension of the apparatus of the lenses, sometimes with subluxation of the lenses. Pathology of the heart is also very common, especially of the aorta. Authors have connected this syndrome with spinal dysraphism or status dysraphicus. This condition is very often found in mentally retarded people of the familial type, especially in oligo-encephaly.

Histological examination of biopsy tissue (skin) does not show demonstrable pathology of the connective

tissue, but mild deviation from the norm in vascularization and appearance of the capillaries.

Among our population at Pineland we also find sometimes such extremely long fingers and toes and increased heights and especially arm span. Few of these patients only show eye and heart complications; nevertheless, we believe that Marfan's syndrome is a relatively common finding in mentally retarded patients.

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**H. S. Baar, M.D., Pineland Hospital, Pownal, Maine.

P. O. Box C, Pownal, Maine

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Shigellosis*

(An Institutional Epidemic)

BARBARA S. FERGUSON, M.D.**

In January, 1957, it was first recognized that there was an epidemic of *Shigella sonnei* dysentery at this institution for mentally retarded children and adults. The In-patient population of the institution at this time was 1400 (Chart No. 1), divided among 12 resident areas (including the hospital). All resident areas except one, (Hill Farm Cottage), produced positive cases. The disease was epidemic in eight resident areas. In four of these buildings, the disease reached epidemic height in February; in one building, epidemic height in March; and in the eighth area, epidemic occurred in September. Retrospectively, it is suggested that the disease existed unrecognized in epidemic form in one resident area as early as September of 1956 and in other resident areas at the end of 1956 (22 cases of Shigellosis were recognized later among patients who had a history of diarrheal disease in 1956). The remaining three buildings produced sporadic positive cases through January, February and March, 1957.

Chart No. 2a gives a weekly picture of diarrheal disease at the institution for 20 weeks prior to bacteriological diagnosis and treatment. In the State of Maine in the year 1956, there was a total of 152 cases of gastroenteritis (unspecified cause) reported, plus two cases of bacillary dysentery.

Chart No. 2b gives the picture of *Shigella* dysentery in this institution while under treatment.

We evaluated the various forms of treatment with respect to initial response, recurrences, and carrier states; also, side effects and efficiency of prophylaxis:

All 423 patients in this study were inmates of this institution. All of them were either observed or treated for diarrhea in the year 1957. Treatment of the majority of patients was with either Sulfadiazine (SD) or Sulfaspersion® (SS). All carriers after June, 1957, were treated with Chloromycetin®. The remaining cases received other antibiotics. All cases who had two or more of the following symptoms were considered to have the disease and received specific therapy:

- | | |
|-------------------|-------------|
| 1. Fever | 4. Nausea |
| 2. Abdominal pain | 5. Diarrhea |
| 3. Vomiting | |

Therefore, 379 of the 423 cases received specific therapy. The remaining 44 patients received no specific therapy as they had diarrhea only, and all but two had three consecutive *negative* stool cultures. Both of these patients died. One had positive post mortem culture, one a negative post mortem culture.

Thirteen of the 44 untreated cases had 2 to 5 bouts of diarrhea, *always* with negative cultures. Two of the 44 cases were receiving prophylaxis at the time symptoms appeared; 15 had received prophylaxis prior to symptoms; one received prophylaxis after symptoms.

As the institution has no bacteriology laboratory, all specimens for culture were submitted to the State Diagnostic Laboratory. Positive cultures were present in 62% of the patients treated, seventeen per cent of the patient population or 18% of the population cultured (1276 patients). Only *Shigella sonnei* was isolated throughout the year. This figure is low because pre-treatment cultures were not taken on all cases. Yet, it compares favorably with the other reports.

Referring to Chart No. 1, it is seen that the school age, mild to moderately retarded males were the most heavily infected. On the female side, the most severely retarded had, as one would have expected, the highest incidence of disease.

TREATMENT

On January 25, 1957 the following schedule of treatment was outlined by the local public health officer: *

Sulfadiazine: Severe cases—5 gm. stat.

1 gm. q 4 hr.

Slight cases—2 gm. stat.

1 gm. q 6-8 hr.

Streptomycin: 1 gm. i.m., b.i.d. for several days, then 0.5 gm. b.i.d.

Terramycin®: 3-4 gm. 1st 24 hours in three doses, then 1½-2 gm. per 24 hours.

Children to receive ½ the above doses.

All patients were to be treated until they had three consecutive negative stools, starting from the sixth day of treatment. All buildings in which shigellosis occurred were closed, i. e., no patients or visitors were allowed in or out of the buildings. Where there were sporadic cases, the case was removed to the hospital for isolation. Buildings were opened seven days after the last case occurred, or was removed.

*From the Department of Research (Peter W. Bowman, M.D., Director), Pineland Hospital and Training Center, Pownal, Maine.

**Formerly Director of Laboratories.

Chart No. 1

	MALE						FEMALE					
	Res. Pop.	Total Cases	Total Rx	No. of Cases	% of Rx	% of Pop. Rx	Res. Pop.	Total Cases	Total Rx	No. of Cases	% of Rx	% of Pop. Rx
Severely retarded	200	61	53	40	75	26.5	200	96	91	52	57	45.5
Mild-Mod. working	150	20	18	14	78	12.0	90	21	16	8	50	18.0
Mild-Mod. school	150	95	95	57	60	63.0	150	43	37	32	86	25.0
Severe	50	19	12	5	42	24.0	50	24	20	9	45	40.0
Old	90	8	7	3	43	8.0	90	12	7	2	29	8.0
							150	24	23	13	55	15.0
TOTAL	640	203	185	119	64		660	228	194	116	60	

On February 1, 1957, the following recommendations for the use of Sul-spansion were given:

Sul-spansion is to be given on the basis of ¾ gr. (50 mgm.) per pound per day in two daily doses every 12 hours; i. e., ½ tsp. per 15 pounds of body weight every 12 hours.

Treatment should be continued until cure will be accomplished, or for a two-week period, whichever occurs first. If, at the end of two weeks, the patient has not recovered or is still carrying the organism in his stools, he should be changed over to another drug and this second drug continued for a similar period.

Prophylactic dose of Sul-spansion is one-half the therapeutic dose, and it may be given in a single dose daily for seven days.

On March 19, 1957, a final revision of treatment was made as follows:

1. All new cases to receive SS in double the previously recommended dose; SD in previously recommended dose.
2. All recurrences in patients who are on Streptomycin for tuberculosis to receive terramycin in the previously recommended dose.
3. All cases where SD and SS failed, to be treated with Streptomycin.
4. All other recurrences than those described in No. 2 to be treated with Streptomycin.
5. All female cases to be isolated in one area; all male cases to be isolated in another area.

Bacteriological cures were defined as three consecutive negative cultures starting from the sixth day of treatment. The following analysis of treatment results is based solely on the success or failure of achieving a bacteriological cure. In addition to culturing all patients under observation or treatment, the following population groups were cultured:

1. All employees working with food — yielded no carriers.
2. All patients working with food — this yielded one carrier who had had diarrhea of undetermined cause in November of 1956 and again in January of 1957.
3. All patients in the three buildings housing the

most severely retarded and the two buildings housing the school children (mild-moderate).

<i>Girls</i>	<i>Boys</i>
K.H. - 5 carriers (Severely retarded)	B.H. - 9 carriers
Y.H. - 0	P.H. - 4
V.H. - 3	

All but V. H. had received prophylaxis before the survey, and all but V. H. had had cases of epidemic proportions before the survey.

4. All patients who had ever had a positive culture were required to submit a stool culture every three weeks times four. This yielded 20 carrier states.
5. All patients leaving the institution for visits, etc., from open buildings were required to have three consecutive negative stools before leaving.

CLINICAL PICTURE

A detailed clinical picture cannot be given. Just prior to recognition of the epidemic, it was reported that the stools of affected diarrheal patients were watery, green, and, not frequently, contained blood and mucus, i. e., "not an ordinary diarrhea." This description was confirmed in the laboratory in the first week that stool specimens were received.

The most severely retarded children in the 5-10 age group were the most severely ill. Dehydration was a problem.

EPIDEMIOLOGY

The outbreak of diarrheal disease was non-explosive, alternating periods of low and high incidence until specific therapy was started (see charts 2a and b). Bacillary dysentery is prone to occur wherever conditions permit the contamination of food and water by feces of infected individuals. The water supply to the institution is a private supply brook, inadequately purified by filtration and chlorination. The water is tested weekly as it comes from the taps and has never been a specific suspect. The possibility that the food as served to inmates and employees could be a source of infection was considered. The central kitchen prepares the food for the entire institution except for the two farms and the canteen. Possibilities for contamination of the food as prepared in the central kitchen existed in the following forms:

CHART No. 2a

DIARRHEA PREVIOUS TO SPECIFIC THERAPY OR DIAGNOSIS

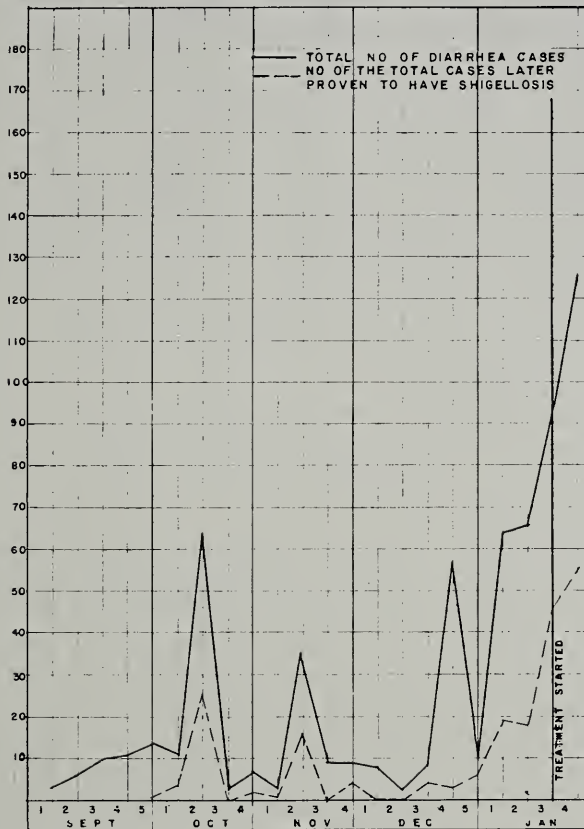
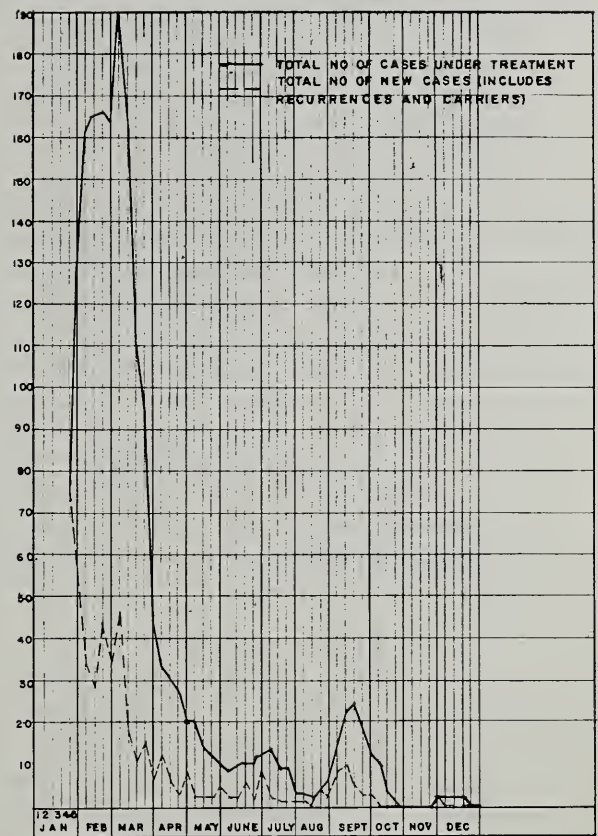


CHART No. 2b

OVERALL PICTURE OF EPIDEMIC



1. Inmate workers are used in this area (as previously stated, one was found to be a carrier).
2. The cleaning of the entire area (including four bathrooms) was the task of the same employees and patients who prepare and serve food. Such cleaning was fitted in between preparations of food.
3. One lavatory was used by the entire employee population and some patients, as well as the food workers.
4. Food containers and bread racks for buildings were for the most part stored and loaded on the floor.

The dishes for the employee's dining room and the food containers for the buildings were washed in one set of machines and were culturally clean, with the exception of the edges of the food containers. The inmates' dishes from the central dining area were washed in another, older set of machines, and were not culturally clean.

A total of 130 employees (35%) were cultured. Eighteen of these were clinically ill and seven had positive cultures. (One Laboratory technician, one psychologist, five nursing personnel) 2% of the total employee population (394) had proven infections. From these facts, it seems fair to conclude that the employees' dishes and food were not a source of infection.

In addition to the above-mentioned hazards, the inmates dining in the central area often share one another's food, and cultures of their clean dishes proved them to be heavily contaminated. The inmates of five dormitories (the least retarded group) are served in the central dining area. The infection rate in these dormitories was as follows:

Bldg. I	(C. H.)	12%	of population infected.
" II	(P. H.)	63%	" "
" III	(S. H.)	18%	" "
" IV	(V. H.)	25%	" "
" V	(G. H.)	8%	" "

The food served to inmates in their dormitories (the most severely retarded) is subject to several additional risks of contamination:

1. The time between loading the food containers (not culturally clean) in the central area and the actual serving in the building was long enough to allow for *bacterial growth*.
2. Dishes in the buildings were hand-washed and towel-dried by inmates.
(The dishes were not culturally clean and coliform organisms were grown from the dishwater.)
3. The food was served to the individual place settings. Following this, the patients were called to the dining rooms.

4. Some of more severely handicapped were fed in the day rooms. The infection rate in these buildings was as follows:

Building I	(B.H.)	26.5%
Building II	(Hosp.)	32.0%
Building III	(N. G. H.)	8.0%
Building IV	(K. H.)	45.5%
Building V	(Y. H.)	15.0%

It is now apparent that food could have been a source of infection. This being New England, baked beans are served on Saturdays, patients' and employees' being prepared separately. It was the day following these meals that outbreaks of diarrhea occurred. This meant that the one doctor on for the weekend had to carry the whole load of cases. For this reason, late in 1956, beans were removed from the weekend menu. It is the writer's opinion that this food was probably the original mode of disseminating the disease, but person-to-person transmission accounted for the continued spread, aided by soiling patients, excessive overcrowding, inadequate nursing staff and facilities.

DISCUSSION OF THERAPY

Since SD and SS were the most frequently used methods of treatment, other forms of treatment will not be included in the discussion in detail. Comparison of effect of treatment on those patients initially treated with Sul-spansion, or Sulfadiazine (not related to age, dose, length of treatment) is shown in the following chart.

Chart No. 3

	SD	SS
Total cases	115	197
Successes	87 (76%)	153 (75%)
% of successes with + cultures	48 55% (67.6% of pos.)	75 50% (64.1% of pos.)
Failures	28 24%	44 25%
% of failures with + cultures	23 87%	42 86%
Total + cases	71 62%	117 58%
Recurrences	16 14%	28 14%
Carrier States	11 10%	8 4%
Side effects	41 36%	48 24%

From this chart it can be seen that the greatest difference in the two drugs is in the much lower incidence of side effects with Sul-spansion. The above groups, less those patients who became ill on prophylaxis, were next broken down by age and dose, with the following results: (Chart No. 4 and Chart No. 5). When broken down by age group, there were more successes with SS in the 5-10 and 10-15 year age groups. The greatest difference (17%) being in the youngest age group. The incidence of side effects in these two age groups was more than double when SD was used. In the two younger age groups, there were more recurrences in the SS treated cases. However, in the youngest age group there were 43% more patients on SD who went on to carrier states.

Side effects were crystaluria, hematuria (gross or microscopic), albuminuria, cyanosis, and rashes.

The forms of treatment were then compared on the basis of fecal cultures.

SS or SD was given in prophylactic doses to all inmates of affected buildings, except the buildings infected in September. Evaluation of the efficiency of prophylaxis has proved to be a difficult task. If one refers to chart 2b, it can be seen that one week (1st week of February) of prophylaxis was followed by a slight (six cases) drop in incidence of new cases. The two-week (4th week of February and 1st week of March) period of prophylaxis was followed by a more marked drop in new cases; however, we know that the disease has been running an intermittent course (chart 2a) and that with the institution of specific therapy there was a marked drop in new cases. Chart No. 7 is an analysis of the cases that became ill on prophylaxis. Thirty patients became ill four or more days after starting SS prophylaxis. At the same time in the same areas, 128 new cases occurred, i. e., 23% of the new cases occurring at this time were on SS prophylaxis. Fifteen per cent of the new cases occurring during SD prophylaxis were actually on SD prophylaxis, 72% of the patients who became ill while on prophylaxis were cured by therapeutic doses of the same drug. The use of prophylaxis did not appear to promote the development of drug resistant strains. (Chart No. 8). One final attempt was made to try to turn up facts which would either prove or disprove the worth of prophylaxis. The 379 treated cases were analyzed as follows:

Chart No. 4

Dose	Age Group	Total Cases	Successes	Successes c + cultures	Failures c + cultures	Total + cases	Recurrences	Carrier States	Side Effects
SD	5 through 10	13	8 62 %	7 87.5%	5 100 %	12 92 %	1 8 %	6 46 %	10 77 %
SS	5 through 10	33	26 79 %	13 50.0%	7 100 %	20 61 %	10 30.3%	1 3 %	9 27.3%
SD	11 through 15	19	12 63 %	6 50.0%	4 57 %	10 53 %	3 16.0%	1 5 %	10 53.0%
SS	11 through 15	37	26 70.25%	15 55.6%	8 72.5%	23 62.1%	10 27.1%	4 10.8%	8 21.3%
SD	16 and up	67	56 84 %	29 52.0%	9 82.0%	38 57 %	8 12.0%	3 4.0%	22 33.0%
SS	16 and up	76	61 80 %	26 44.0%	12 80.0%	39 51 %	3 4.0%	0 0%	25 33.0%

Chart No. 5

Age Group	Drug	Dose	Total Cases	Successes	Successes c + cultures	Failures c + cultures	Total + cases	Recurrences	Carrier States	Side Effects
5-10	SD	adequate	13	8 62.0 %	7 87.5%	5 100 %	12 92.0%	1 8.0%	6 46.0%	10 77.0%
	SS	adequate	27	21 78.0 %	13 62.0%	6 100 %	19 70.5%	7 25.9%	0 0%	7 25.0%
	SS	inadequate	6	5 83.4 %	0 0%	1 100 %	1 16.6%	3 50.0%	1 16.6%	2 33.3%
11-15	SD	adequate	19	12 63.0 %	6 50.0%	4 57.0%	10 53.0%	3 16.0%	1 5.0%	10 53.0%
	SS	adequate	30	20 66.7 %	10 50.0%	8 80.0%	18 60.0%	6 20.0%	3 10.0%	5 16.6%
	SS	inadequate	7	6 85.75 %	5 83.4%	0 0%	5 71.5%	4 57.0%	1 14.3%	3 43.0%
16 & up	SD	adequate	67	56 84.0 %	29 52.0%	9 82.0%	38 57.0%	8 12.0%	3 4.0%	22 33.0%
	SS	adequate	32	24 75.0 %	8 33.0%	7 78.0%	15 47.0%	0 0%	0 0%	9 28.0%
	SS	Dub. dose	40	34 85.0 %	18 53.0%	4 80.0%	22 55.0%	1 2.5%	0 0%	9 22.5%
	SS	inadequate	4	3 75.0 %	11 33.0%	1 100 %	2 50.0%	0 0%	0 0%	1 25.0%

Chart No. 6

Drug	Dose	Av. days of Rx.	Av. delay before Rx.	Episodes	Culturally positive cases							
					0-6 days		6-14 days		14 & up days			
					#	%	#	%	Cleared	#	%	Cleared
					Based only on those cultured							
SD	adequate	18.2	2.3 days	145	53	66	27	21	47	15	19	48
SS	adequate	19.5	.6 days	143	44	72	43	33	34	17	18	60
	Double dose	14.6	1.4 days	72	35	65	13	21	45	3	15	15
	Inadequate	24.8	.9 days	26	7	64	7	30	1	4	18	22
Chloro- mycetin	adequate	11.6	5.0 days	49	42	86	1	2	15	0	0	29
Other Anti- biotics	adequate	13.2	1.35 days	121	37	37	8	8	65	4	12	18

Chart No. 7

Age Group	Medication	Dose	Epi-sodes	0-6 days			6-14 days			14-up days		
				#	*	%	#	*	%	#	*	%
5-10	SD	Adequate	20	16	14	87.5	20	5	25	13	6	46
	SS	Adequate	34	20	15	75	32	13	41	29	7	24
	SS	Double	11	6	5	63	9	3	33	6	1	17
	SS	Inadequate	10	2	1	50	9	2	22	10	2	20
	Chloromycetin	Adequate	15	15	14	93	14	0	0	9	0	0
	Other antibiotics	Adequate	47	41	17	41	40	5	12.5	15	3	20
11-15	SD	Adequate	31	16	10	62.5	27	5	19	16	3	19
	SS	Adequate	42	19	13	68	36	11	31	30	8	26
	SS	Double	7	6	3	50	5	0	0	2	0	0
	SS	Inadequate	8	4	3	75	8	3	37.5	7	0	0
	Chloromycetin	Adequate	15	15	14	93	15	0	0	9	0	0
	Other antibiotics	Adequate	28	28	8	34	23	2	9	6	0	0
16-up	SD	Adequate	94	48	29	60	83	17	20	50	6	12
	SD	Inadequate	2	1	0	0	2	1	50	0	0	0
	SS	Adequate	67	22	16	73	62	19	31	33	2	6
	SS	Double	54	42	27	64	48	10	21	12	2	17
	SS	Inadequate	8	5	3	60	6	2	33	5	2	40
	Chloromycetin	Adequate	19	19	14	74	13	1	8	11	0	0
	Other antibiotics	Adequate	46	37	12	32	33	1	3	12	1	8

*Total number cultured.

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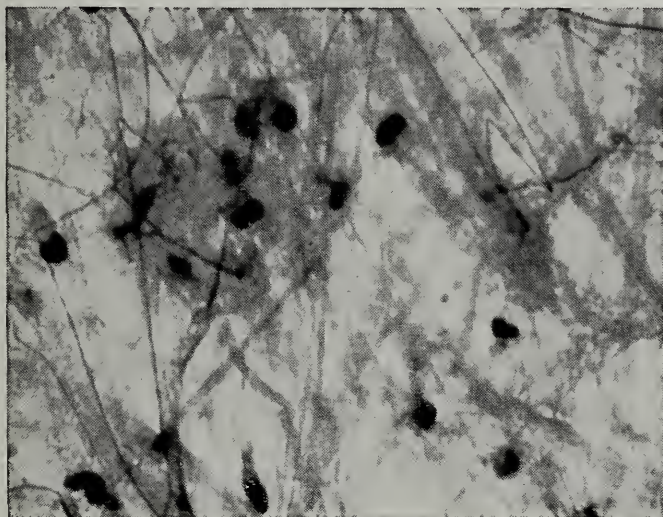
Aristogesic combines the *anti-inflammatory* effects of Aristocort* Triamcinolone with the *analgesic* action of a most potent salicylate. This means that the dosage of each is *substantially lower* than that ordinarily required for each agent alone. With Aristogesic the physician has exceptionally wide latitude in adjusting the dosage to the lowest effective level.

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Indications: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, mild spondylitis, myositis, fibrositis, neuritis and certain muscular strains.

Dosage: Average initial dosage: 2 capsules 3 or 4 times daily. Maintenance dosage to be adjusted according to response.

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 ARISTOCORT® Triamcinolone 0.5 mg.
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PROPHYLAXIS

Chart No. 8

Bldg.	Drug	# rec'd prophylaxis	Date	# ill in bldg. # at this time		# taken ill on prophylaxis		Risk of cross infection
				Total	New	0-3	4-up	
GH	SS	13	2/21-27	5	3	0	0	Minimal
GH	SS	61	3/2-12	3	1	1	0	"
Hosp. B	SS	14	2/1-8	15	3	0	0	"
KH	SS	77	2/1-8	59	39	4	1	Severe
KH	SS	87	3/1-14	37	12	1	2	"
YH	SS	70	2/1-8	3	1	0	0	Moderate
PH I	SS	83	1/31-2/8	18	18	6	6	"
PH I	SS	29	2/22-3/8	51	6	0	1	"
PH II	SS	70	3/1-18	35	26	4	20	"
VF	SS	52	2/20-3/12	5	5	0	0	Minimal
CH	SS	76	2/7-14	13	11	6	0	"
NGH	SS	37	2/25-3/5	3	3	0	0	Mod.-severe (10 of 30 had + cul.)
TOTAL		669		247	128	22	30	

Hosp. B	SD	16	2/1-8	15	3	0	0	Minimal
KH	SD	86	2/1-8	59	39	2	0	Severe
KH	SD	30	3/1-14	37	12	0	3	"
YH	SD	70	2/1-8	3	1	0	0	Moderate
YH	SD	75	2/28-3/16	19	18	0	5	"
SH	SD	90	1/28-2/6	11	1	0	1	Minimal
SH	SD	90	2/28-3/18	5	3	1	1	"
BH	SD	190	1/29-2/7	31	10	0	3	Severe
PH II	SD	75	2/1-8	3	2	0	0	Moderate
NGH	SD	79	2/25-3/5	3	3	0	0	Mod.-severe
HF	SD	62	2/27-3/8	3	3	0	1	Minimal (7 of the 14 had + cultures)
TOTAL		863		189	95	3	14	

- I. 61% (231) of the treated cases (379) were cured by initial treatment.
66% (153) of the 231 received prophylaxis at some time during the epidemic.
23% (53) received SD
32% (74) received SS
11% (26) received SD and SS
34% (78) received no prophylaxis.
- II. 14% (54) of the total treated cases had recurrences requiring treatment.
50% (27) of the cases with treated recurrences had received prophylaxis.
19% (10) received SD
30% (16) received SS
2% (1) received both
50% (27) received none
- III. 23% (88) of the total treated cases had recurrences not requiring treatment (i. e. diarrhea only and culturally negative).
- IV. 11% (43) of the total treated cases were carriers (silent, convalescent, etc.)
56% (24) of the carriers had received prophylaxis
35% (15) received SD
16% (7) received SS
5% (2) received both
44% (19) received none
- V. 34% (127) of the treated cases (379) never received any prophylaxis. In other reports, 65% (9) of the patients affected had only one episode, 35% had one or more recurrences. Elsewhere, (7a), recurrences occurred in 16% of the cases. In a men-

50% (44) of these 88 received prophylaxis at some time

17% (15) received SD
29% (25) received SS
5% (4) received both
50% (44) received none

tal hospital in Puerto Rico 19.6% of the inmates examined were found to be infected¹, (18% of our examined population were infected). It would, therefore, seem that prophylaxis was of no value in altering the course of the epidemic.

CARRIERS

There were a total of 43 carriers (passive, convalescent) 35% (15) were never known to have symptoms. The remaining 28 cases carried the organism for 1-8 months after recovery from their illness, the average, 3.6 months.

Number of cases	Last + culture
1	1 mo.
7	2 mo.
6	3 mo.
8	4 mo.
3	5 mo.
1	6 mo.
1	7 mo.
1	8 mo.

DEATHS

There were four deaths. The first death case was a male patient who had been ill for one week with common cold, bronchitis and, according to the matron, diarrhea. In the morning of the day of death, the patient was found in shock, with a temperature of 104°. At autopsy, the body presented signs of dehydration. The bowel was "empty throughout its length except for small amounts of green mucoid material in the small bowel, and approximately 50 cc. of soft yellow fecal material in the rectal ampulla. At the proximal 3-4 ft. of the small bowel, there are three ascaris present. The first 10 cm. of the large bowel show a reddened mucosa. Approximately 5 cm. above the anus, extending for a distance of 5 cm. the rectal mucosa is hemorrhagic and the wall thickened with edema fluid." "the mesenteric lymph nodes are enlarged . . . and white surface with scattered petechial hemorrhages." Microscopic sections of bowel, mesenteric lymph nodes and lungs revealed no evidence of larval forms of ascaris. Post mortem culture of large bowel taken two days post mortem was negative for *Salmonella* and *Shigella*.

The second death was the case of a well-developed, 20-year old male epileptic, who died suddenly. Five days prior to death, patient had had a temperature of 101° with sore throat, enlarged, inflamed, left tonsil. Three days prior to death he was discharged from medical care as recovered from acute illness. The cause of death was asphyxia during a convulsion.

Thompson and Panos, in a series of 68 patients with shigellosis found a higher incidence of convulsive seizures than would be expected in simple "febrile convulsions."

At autopsy "the mesenteric lymph nodes are enlarged and softer than usual. The average dimension of their long axis is 1 cm. The cut surface of these nodes bulges

above the capsule. The nodes are homogenous gray-pink." The spleen weighs 160 gm. the cut surface is deep red. Malpighian bodies are enlarged up to .2 cm. in diameter and appear more numerous than usual. The intervening parenchyma is semi-fluid. Throughout the large bowel the mucosal lymph follicles are enlarged. The lumen of the small and large bowel is practically empty. A culture is taken by swab from the proximal portion of the colon and from the rectal ampulla. (Culture report: "*Shigella sonne* isolated").

The third death was the case of a well-developed, 43-year old female. This patient had, in October of 1956, diarrhea of unspecified cause. In February of 1957 she again had diarrhea, due to *Shigella sonne*. At this time she received an 18-day course of Sulfadiazine. She had a recurrence in March and again received Sulfadiazine, this time for roughly a four-week course. Five days after the termination of this last course the patient developed nausea, vomiting, and a temperature of 100°. She was also said to have diarrhea, and Sul-spanion was started. A repeat examination of the patient later on this day revealed the fact that she was constipated. Four days later the patient suddenly became cyanotic with a pulse of 120. She died nine hours later. Autopsy revealed no evidence of bacillary dysentery. The patient had tuberculosis of the adrenal and massive fecal impaction of the large bowel. "The rectum has a circumference of 27 cm. and contains 1640 gm. of feces." There were some sulfa deposits in the renal pyramids, but not of sufficient number to interfere with renal function.

The fourth death was the case of a 20-year old patient, who weighed 60 pounds. This patient's mental deficiency was due to phenylpyruvic oligophrenia. This patient developed diarrhea and fever six days prior to death. She was started on Sul-spanion, two tablespoons twice a day, five days prior to death. Two stool cultures were sent, both while on treatment and both were negative for *Salmonella* and *Shigella*. On the morning of death, the patient suddenly became cyanotic, pulse and blood pressure were unobtainable, the heart rate was 128, the temperature 97°. The patient died three hours later. At autopsy there was no evidence of bacillary dysentery. The kidneys contained some sulfa crystals and, in this instance, the deposition is due to administration of Sul-spanion, since this patient had never received any other sulfa preparation.

It is felt that in case No. 3 death was due to sulfa toxicity, though no histological evidence was found to support a diagnosis of sulfa-hypersensitivity or toxic nephrosis, case No. 4 may possibly belong in this category.

CONCLUSIONS

Sul-spanion was found to be an effective form of therapy for *Shigella sonne* dysentery. Cases of crystal-luria and hematuria did occur with this preparation, but

all were transient and, in no instance was the drug discontinued because of toxicity. The prophylactic use of drugs does not appear to be of value. Much more important is unremitting attention to hygiene and sanitation.

Strictly enforced rules in preparation, storage and distribution of food, sterilization of food containers, dishes, etc. are essential. Periodic routine stool cultures of all personnel and patients involved in the preparation and distribution of food are essential.

Adequate purification of the hospital water supply is mandatory.

Hospitals dealing with soiling patients should submit stool specimens for diagnostic studies in all cases of diarrhea as the only safe method of prevention.

In the fourteen months since the epidemic, 594 diagnostic and routine stool cultures have been done with no pathogens/or *Shigella* isolated.

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A Comparative Survey Of Audiometric Results Among Residential, Rural And Suburban School Populations*

LEE ANN JOHNSTON, B.S.** AND A. J. PAPPANIKOU, M.A.***

Several studies indicate that mentally retarded individuals exhibit a greater degree of physical and sensory handicaps than "normal" children^{1,3,5,6}. The present study will attempt to support the initial statement by comparing the auditory acuity of institutional retardates, and rural and suburban public school children. It will also attempt to find out if there is any difference in hearing between rural and suburban groups.

SAMPLE

The entire procedure utilized for the audiometric evaluations was explained to each classroom teacher. A list was obtained containing the names, grades, and birthdates of the children to be tested. A total of 596 subjects, between the ages of 8 and 17 inclusive, received an audiometric evaluation. 255 subjects were classified as rural (New Gloucester); 265 as suburban (Falmouth); and 76 subjects were of the educable residential school population (Pineland Hospital and Training Center). The grade range in the public schools fell between the first and twelfth grades. Due to the difficulty in administering a pure audiometric evaluation to severely retarded youngsters, only the educables (I.Q. 50 and above) of the residential school population were considered. Therefore, the subjects were obtained from kindergarten through grade five.

Although only 76 subjects compose the Pineland group, as compared to 265 suburban and 255 rural, many other educable retardates were tested. Reliability was found to be lacking in these additional subjects tested. (The pure tone audiometric test was administered a second and third time to some of the Pineland's population where the results indicated the need for it. Due to the inconsistent results they were not included in the final tabulation. We, therefore, had only 76 audiograms that we considered definitely valid.)

PROCEDURE

The initial step involved securing soundproof rooms or a reasonable approximation. In the public schools

many of the grades were divided into 2 or more classes. As a result, one class was chosen at random to represent each grade.

The "Beltone" pure tone audiometer was used in all cases. Subjects could not observe examiner's hand or actions nor were they allowed to see the face of the audiometer. This helped to prevent malingering and guessing. The public school evaluations were administered with 2 children in the testing room at the same time so that each child heard the instructions twice. The second child was seated several feet behind the child being tested. This method could not be utilized at Pineland due to the distractability of many of the subjects involved.

Younger subjects were told about the earphones through such methods as "like airplane pilots" or "telephone operators." In some cases, the examiner wore the earphones briefly to eliminate fear. The entire procedure was explained and the subject was then asked to repeat part of the instructions. The earphones were placed in position and a brief sweep check administered. Following the sweep check, subjects were reminded that the tone would be greatly decreased for actual testing. Subjects responded to pure tones through hand-raising. The initial ear tested was the right ear.

The frequencies utilized in the testing procedure were 250, 500, 1000, 4000 and 8000. Unexpected changes in pitch and volume proved valuable in regaining or retaining the attention of hyper-active, restless children.

A few of the evaluations required a duration of 20 to 25 minutes prior to completion of an accurate test. The majority of the public school subjects tested required approximately 7 to 12 minutes for a six frequency, bilateral test. The length of time required when testing the institutionalized children ranged between 8 and 25 minutes with an average of 13 minutes.

In order to formulate conclusions regarding the data obtained, the following decibel classification was made: Normal up to 15 decibel loss; Slight loss 15-35 decibels; Moderate loss 35-55 decibels; Severe loss 55 decibels and below.

A grouping of frequencies was also made so as to facilitate analysis of results:

1. "Low Frequency" involved 250 to 500 frequencies inclusive.

*From the Department of Research, Pineland Hospital and Training Center, Pownal, (Peter W. Bowman, M.D., Director).

**Speech Therapist.

***Director, Department of Education.

- 2. "Speech Range" involved the frequencies of 500 through 2000 inclusive.
- 3. "High Frequency" involved 4000 through 8000 frequencies.

The children tested were divided into the following chronological age groups: 8 to 10; 10 to 12; 12 to 14; 14 to 16; and 16 to 18.

The audiograms were then tabulated in respect to the 4 decibel categories previously described in the preceding page with reference to the above mentioned 3 frequency divisions.

RESULTS

(See accompanying tables)

Of the 265 subjects classified as suburban only one subject revealed a severe hearing loss at any frequency. This was a bilateral, high frequency loss.

Total Number of Losses in the Severe Category				
School	Right Ear	%	Left Ear	%
Suburban	1	0.12	1	0.12
Rural	1	0.13	3	0.39
Pineland	7	3.07	10	4.38

In the rural group, one subject showed a severe high frequency loss in the right ear; two subjects revealed severe high frequency losses in the left ear; and one pupil exhibited a severe low frequency loss in the left ear.

As to Pineland's educable retardates, it was found that they manifested a greater number of severe losses than either the Suburban or Rural population (7 times greater than either public schools in the right ear and 10 and 3 times, respectively, greater in the left ear). These results are more indicative when one takes into account that the retarded sample was much smaller than either of the neighboring public schools (Pineland—76, New Gloucester—255, Falmouth—265).

MODERATE LOSSES

The number of youngsters in the suburban group, whose hearing exhibited a moderate loss, was two. Both were left ear losses with one in the speech range and the other in the high frequency area.

Total Number of Losses in the Moderate Category				
School	Right Ear	%	Left Ear	%
Suburban	0	0	2	0.24
Rural	6	0.78	5	0.65
Pineland	20	8.77	9	3.94

Among the rural group, 6—moderate right ear losses appeared (2—low frequency, 1—speech range and 3—high frequency). Left ear moderate losses were 5 in number with 2 in the low frequency, one in the speech range and 2 in the high frequency area.

At Pineland, moderate right ear losses were 20 in number and appeared in the following manner: 7—low frequency, 5—speech range and 8—high frequency. There were 9 left ear moderate losses (3—low frequency, 3—speech range and 3—high frequency).

This again shows that the retardates' moderate hearing losses were greater than either the suburban or rural population. It also points out that the rural population had a greater number of pupils with moderate hearing losses than the suburban sample.

SLIGHT LOSSES

Of the Falmouth school subjects, slight right ear losses occurred as follows: 74—in the low frequency, 2—in the speech range and 12—in the high frequency group. The slight left ear losses were distributed as follows: 50—in the low frequency, 4—in the speech range and 6—in the high frequency area.

Total Number of Losses in the Slight Category				
School	Right Ear	%	Left Ear	%
Suburban	88	11.06	60	7.54
Rural	153	20.00	107	13.98
Pineland	67	29.38	54	23.68

At New Gloucester, the number of losses again increased over their suburban peers but remained considerably less than the institutionalized population. Slight right ear losses among the rural group occurred as follows: 90—in the low frequency, 27—in the speech range and 36—in the high frequency. The left ear losses were detected with 66—in the low frequency, 9—in the speech range and 32—in the high frequency.

The 76 institutionalized subjects exhibited a total of 121 slight hearing losses. 40 of these were right ear low frequency losses, 11—right ear losses were speech range and 16—right ear losses were high frequency. The slight left losses include 29 in the low frequency, 8 in the speech range and 17 in the high frequency.

NORMAL RESPONSES

The distribution of normal responses is as follows: In Falmouth, 191—right ears in the low frequency, 263—in the speech range and 252—in the high frequency group responded adequately.

Total Number of Normal Responses				
School	Right Ear	%	Left Ear	%
Suburban	706	88.80	732	92.07
Rural	605	79.08	650	84.96
Pineland	134	58.77	155	67.98

In the left ear 215—normal responses were recorded in the low frequency, 260—in the speech range and 257—in the high frequency.

Among the rural population, there were 163—normal

A COMPOSITE OF ALL FINDINGS

Falmouth Suburban	Frequency Group	Normal		Slight Loss		Moderate Loss		Severe Loss		Total Tested
		Rt.	Left	Rt.	Left	Rt.	Left	Rt.	Left	
C. A. 8-10	Low	28	36	16	8	0	0	0	0	44
	Speech	43	44	1	0	0	0	0	0	
	High	43	44	1	0	0	0	0	0	
C. A. 10-12	Low	47	49	4	2	0	0	0	0	51
	Speech	51	48	0	3	0	0	0	0	
	High	49	48	2	3	0	0	0	0	
C. A. 12-14	Low	46	55	16	7	0	0	0	0	62
	Speech	62	62	0	0	0	0	0	0	
	High	61	62	1	0	0	0	0	0	
C. A. 14-16	Low	39	39	23	23	0	0	0	0	62
	Speech	61	60	1	1	0	1	0	0	
	High	54	58	7	2	0	1	1	1	
C. A. 16-18	Low	31	36	15	10	0	0	0	0	46
	Speech	46	46	0	0	0	0	0	0	
	High	45	45	1	1	0	0	0	0	
New Gloucester										
Rural										
C. A. 8-10	Low	23	24	6	5	0	0	0	0	29
	Speech	28	29	1	0	0	0	0	0	
	High	24	26	5	3	0	0	0	0	
C. A. 10-12	Low	42	50	30	22	0	0	0	0	72
	Speech	69	68	3	4	0	0	0	0	
	High	64	66	8	4	0	2	0	0	
C. A. 12-14	Low	34	44	29	19	1	1	0	0	64
	Speech	43	61	20	3	1	0	0	0	
	High	49	49	12	15	2	0	1	0	
C. A. 14-16	Low	37	38	13	11	1	1	0	1	51
	Speech	49	49	2	1	0	1	0	0	
	High	43	42	8	7	0	0	0	2	
C. A. 16-18	Low	27	30	12	9	0	0	0	0	39
	Speech	38	38	1	1	0	0	0	0	
	High	35	36	3	3	1	0	0	0	
Pineland										
C. A. 8-10	Low	3	4	1	0	0	0	0	0	4
	Speech	3	4	1	0	0	0	0	0	
	High	3	3	1	1	0	0	0	0	
C. A. 10-12	Low	3	5	5	4	0	0	1	0	9
	Speech	4	8	4	1	0	0	1	0	
	High	4	8	2	0	2	0	1	1	
C. A. 12-14	Low	9	10	5	4	1	1	0	0	15
	Speech	14	12	1	2	0	1	0	0	
	High	12	9	3	5	0	0	0	1	
C. A. 14-16	Low	4	10	15	8	1	1	0	1	20
	Speech	17	18	2	1	1	1	0	0	
	High	16	15	2	3	2	1	0	1	
C. A. 16-18	Low	8	12	14	13	5	1	1	2	28
	Speech	20	21	3	4	4	1	1	2	
	High	14	16	8	8	4	2	2	2	

right ear responses in the low frequency, 227—in the speech range and 215—in the high frequency. In this same group of subjects there were 186—normal left ear responses in the low frequency, 245—in the speech range and 219—in the high frequency.

The number of normal responses diminished with the Pineland subjects. In this group there were 27—normal low frequency right ear responses, 58—in the speech range and 49—in the high frequency area. There were 41—normal low frequency left ear responses, 63—in the speech range and 51—in the high frequency area.

CONCLUSIONS

The present study verifies the initial hypothesis and supports the findings of Birch and Mathews¹, Myklebust², Johnston and Farrell³, and Kodman⁴. There is a greater incidence of hearing losses among mentally retarded children than among public school children. It further points out that the suburban population manifests fewer hearing difficulties than does the rural. The following explanations for this finding are offered:

1. The sample might not have been representative.
2. If one takes into account the possibility that the rural population tends to intellectually be lower than the urban⁷ and applying Terman's findings⁸ concerning the physical and sensory abilities of brilliant children one may assume that on the average, children with higher intellectual potential tend to have fewer physical and sensory handicaps.
3. Medical attention may be more readily avail-

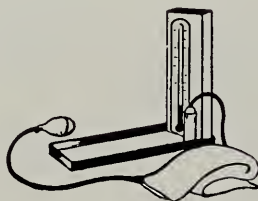
able in suburban than in rural areas so that otitis media and other conditions may be treated more promptly and consequently with better results, (prevention).

4. "Rural" parents may be less sensitive to infections in their children than parents in suburbia.

Our results would indicate that further studies might contribute valuable data regarding preventive and sociological aspects.

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Across The Desk

Public Health Consultant Questions A.E.C. Radiation Safety Role

Dr. Russell H. Morgan, professor of radiology at Johns Hopkins University, is among those who question the Atomic Energy Commission's dual function of developing atomic energy and determining the health and safety factors involved. Dr. Morgan recently told a Joint Congressional Atomic Energy Subcommittee "there is no such thing" as a safe radiation level, despite widely accepted belief to the contrary. He heads a special advisory committee on radiation of the U. S. Public Health Service which soon will recommend a broad program to control and measure the total radiation being received from fallout. The report will deal with medical treatment. The subcommittee which received his testimony is studying radiation hazards in relation to possible new legislation in industrial and other fields.

Views Of AEC Chairman

Chairman John A. McCone of Atomic Energy Commission told a Congressional committee last week he would raise no objection to transfer of some of AEC's radiation protection functions to another government agency. He reported that in the current fiscal year his agency will spend \$18 million for research in radiation standards and protection; \$2.5 million for sampling and

analysis for fallout studies; \$450,000 for training fellowships in health physics and industrial hygiene.

National Appointment For Maine M.D.

Notice has been received in this office from Mr. C. Joseph Stetler American Medical Association Law Department, of the appointment of Martyn A. Vickers, M.D., Bangor, to AMA's Legislative Council.

In this new position of responsibility, Doctor Vickers will represent all the New England States.

Veterans' Medical Fees

On Capitol Hill there is growing sentiment against higher fees for private physicians furnishing outpatient care to veterans for service-connected disabilities. The connection, if any, between this antagonism and continuing efforts by organized medicine to have non-service-connected conditions disqualified for federal benefits is conjectural.

Medicare And VA Fees Challenged

Meeting recently behind closed doors, the House Appropriations Committee grilled military authorities intensely on fees paid to general practitioners and specialists for care of servicemen's dependents. A hint

of their concern is evidenced by language in a report made by the committee ten days ago on an earlier piece of legislation:

"... it is concerned at the high cost of caring for military personnel and their dependents in civilian hospitals and the high fees that have been allowed in the Medicare programs. The committee has gained the impression that little or no effort has been made to obtain reasonable rates for fees and expenses."

Medicare Investigation

Developments seem to be building up toward a Congressional investigation of the Medicare program. The latest event was an article in the April 4 *Army-Navy-Air Force Register* and *Defense Times* ascribing dubious Medicare dealing to some physicians by Brig. Gen. Floyd L. Wergeland, who heads this program. Main Charge: Growing number of physicians is making supplemental billings to Medicare patients, despite contractual obligations to accept government compensation as full payment.

Keogh Bill Goes To Senate: Timetable Uncertain

With surprising ease, the House dispatched to the Senate the Keogh-Simpson measure for tax deferral by the self-employed of up to \$2,500 annually. Although there were rumblings that the legislation might encounter stiff resistance due to the recent stand of the administration against the bill, only some 15 or 20 lawmakers of more than 200 house members on the floor shouted "no" on the voice vote tally. Opponents decided not to press for a roll call. The big question in the Senate is whether backers will push for hearings this year or wait until next session when the budget issue may be more settled. A bill stays alive, of course, for the entire two-year term of a Congress, but must start all over again through the entire legislative process if not enacted at the end of a Congress. There are almost two entire sessions now for consideration of the measure in the Senate, unlike last year when Sen. Harry Byrd (D., Va.), chairman of the Senate Finance Committee, refused to chart hearings on the house-passed bill on the grounds it was too late in the session.

Significant Developments Brewing In Senate

The public hearings planned by a special Senate subcommittee on government's role in providing medical care and welfare services for the aging will exert strong influence on Administration policy in this field. Senator Pat McNamara (D., Mich.), ardent supporter of liberal legislation, will have charge of these hearings. Almost any day their dates will be revealed, also identity of staff head.

Physicians and others who have opinions, reports or

suggestions on general subject of health and welfare of senior citizens are invited to communicate with Senator McNamara.

Another liberal Democratic Senator, Oregon's Wayne Morse, is head of a subcommittee which plans to open hearings this spring on premium charges for prepaid medical care and hospitalization insurance. Dates to be announced within a few weeks.

Medical economics is the theme of still another forthcoming Senate inquiry. A series of public hearings on legislation granting medical care insurance for about five million federal employees and their dependents will open April 14. Senator Richard Neuberger (D., Oreg.) is chairman.

The House-passed Keogh-Simpson bill is on the calendar of the Senate Finance Committee. Chairman Harry F. Byrd (D., Va.) is not inclined to expedite action on this pension plan, strongly supported by AMA.

After a hiatus of several years, Senator James E. Murray (D., Mont.) and Rep. John D. Dingell (D., Mich.) again are trying to whip up interest in compulsory national health insurance. This could be a major issue next year, just as it was a decade ago.

Surveys Show Why People Resist Vaccination Efforts

If you're wondering why horses couldn't drag some people to their doctors for polio shots, it may be because they aren't being appealed to on the right basis. California Department of Public Health conducted a survey among uninoculated citizens and found the biggest reasons for not obtaining protection were fear and procrastination.

Fourteen percent of the people interviewed doubted the safety of the vaccine. Forty-six percent of the uninoculated said they were too busy or couldn't be bothered. Expense, according to the survey, was a problem to 15 percent of those earning under \$2,000 a year. Twenty-four percent of the interviewees with children under six years thought their offspring were too young for the shots.

This year polio inoculation campaigns will be directed toward those hard-to-persuade groups who have resisted previous efforts. If your medical society is planning to round up these stragglers, a survey like California's might point up who the laggards are and why they aren't getting their shots. Then publicity can be aimed in the right direction. Contact your local health department, voluntary health agencies or woman's auxiliary for help.

Chiropractic Makes Bid

The chiropractic lobby does not give up easily. For years it has been seeking passage of a bill permitting veterans to utilize their services, on an outpatient basis, at government expense. Neither House nor Senate has

ever passed such a measure. Now a fresh try is being made. Sponsors of companion bills are Rep. Edith Nourse Rogers (R., Mass.) and Senator William Langer (R., N. D.).

Chiropractic Also Making A Bid In The State Of Maine

L.D. 938, a bill before the Maine State Legislature, designed to permit chiropractors to treat industrial accidents, is receiving much attention from the legislators in Augusta. It is important that you make your views on this bill known to your legislators now.

Many Doctors Affected By Tax Court Decision

A recent ruling by the U. S. Tax Court is of importance to those legions of physicians and dentists who take graduate training of one kind or another each year. While the court's decision in this case lays down no general rule, it may prove to be an added incentive particularly to general practitioners to strive for greater professional breadth.

The facts, briefly, are these: Dr. John S. Watson, an internist of Worthington, Ohio, underwent psychoanalysis and studied psychiatric techniques so that he might be a better practitioner of internal medicine. In 1954-55, training and travel expenses approximated \$9,000, which he deducted as a business outlay. This was disallowed by the Commissioner of Internal Revenue. Dr. Watson appealed to the Tax Court.

"Ordinary and Necessary"

Before the Tax Court, the Commissioner held that it is not "customary" for a doctor to spend money for

analysis and psychiatric training, therefore Dr. Watson's expenditure did not qualify as an ordinary and necessary expense for tax purposes. But this did not impress the court, which said in part:

"It is in the realm of common knowledge that many physicians ordinarily continue to enlarge their medical education after their fundamental training has been completed and they have embarked on their practice. . . . He (Dr. Watson) took the course, not for the purpose of becoming a specialist as a psychiatrist, but for the purpose of better carrying on his own practice. . . . We hold the claimed deductions should be allowed." And that, it might be added, is final.

Report On Health Care Of Aging Is Submitted

Two months late, a lengthy report on the growing problem of providing health care services to the aging population was submitted last week to the House Ways and Means Committee by Department of Health, Education and Welfare. The delay indicates that wholesale changes have been made in the draft that was debated last February at a closed-session conference.

Dr. Lester Is Fourth Head Of AMA In Washington In Two Years

Dr. Roy T. Lester, thoracic surgeon and medical director of Texas Blue Cross-Blue Shield for the past five years, is the latest to take a crack at managing AMA's Washington office. Since it was set up after the close of World War II, the office has had six heads — four of them since 1957. Dr. Lester's selection was announced by fellow Texan, Dr. F. J. L. Blasingame, executive vice president of AMA.

Proposed Amendment to the Constitution of the Maine Medical Association

At the Interim Meeting of the House of Delegates of the Maine Medical Association on Sunday, April 5, 1959 at Brunswick, Maine the following resolution was approved — that the **alternate delegate** to the American Medical Association be a member of the Council of the Maine Medical Association and that the necessary changes be made in the Constitution and By-Laws — i.e., Article VI would read: The Council shall consist of the President, President-Elect of the Association, Executive Director (if a member of the Association), Secretary-Treasurer (if a member of the Association), the immediate Past President, the delegate and **alternate delegate** to the American Medical Association, and one Councilor from each Councilor District. Seven members shall constitute a quorum.

Final Action on this proposed amendment will take place at the annual meeting of the House of Delegates on Sunday, June 21, 1959 at The Samoset in Rockland.



DEAN H. FISHER, M.D.
COMMISSIONER

State of Maine

Department of Health and Welfare

The Nature of the Supervisory Function As It Relates to Nursing Homes*

JOSEPH H. KINNAMAN, M.D.**

Responsibility for supervision is shared by many official agencies, by the operator, by professionals practicing in the facility and to some degree, by the general public.

The purpose of supervision is at least fivefold. First, to elevate the generally prevailing standards of patient care. Second, to assure that care will be individualized in accordance with the professionally determined changing needs and limited only by legal restrictions imposed on the operation of this type of medical care facility. Third, to stimulate and foster the development of additional nursing homes whenever needed. Fourth, to increase the economy of delivery of optimal services and hence conserve individual and community resources. Lastly, to aid in effecting easy two-way mechanisms of referral of a person from one type of care facility to another when such replacement will benefit the individual.

The nature and extent of supervision and regulation will vary with communities. Also, with the major focus of those involved in these functions. Town and village governments generally were first to recognize the need for regulation of such homes. Important as provisions of zoning ordinances, building codes and fire laws are in environmental control, they contribute relatively little to the totality of preventive, health, medical and social services required by persons in the homes. State and local health and welfare agencies only recently have been made responsible for supervision and regulation of such homes.

Quite naturally, health and welfare agencies focus primarily on such goals of supervision as the elevation of standards of patient care, the economic delivery of

individualized services geared to needs of patients as determined by professional evaluations and preparation of agency personnel to use effectively the epidemiologic approach — a composite of fact-finding, analysis and the application of significant results in problem solving and in planning new facilities and improvements and additions to existing homes.

Efforts to improve standards in nursing homes may take two directions — the preventive or the corrective. Both require considerable investment in time and money. Results through prevention are enduring and constructive. The outcome through correction are frequently disappointing and temporary. Education and consultation underpin the former. Inspection and enforcement form the basis for the latter.

Here is a brief outline of some of the preventive methods employed in Nassau County. Teaching begins with the first contact with the prospective operator. A public health physician states the basic philosophy of supervision of such homes in Nassau County. He fully informs this individual of all laws, rules and regulations governing nursing homes and of the department services available to prospective and actual operators. The concept that nursing and convalescent homes are medical care facilities and therefore that they have a place in an effective community program for the care of the chronically ill receives primary emphasis. As a follow-up to this conference, the prospective operator is advised to put in writing the answers to two questions: What does he or she propose to do? How does he propose to do this? The department arranges for a joint inspection by fire and building authorities of a building under consideration for conversion or remodeling. All plans for new buildings and additions to existing ones are reviewed and must be approved before construction is begun. Public health engineers and sanitarians counsel about sanitary installations, food handling and storage, and dishwashing setup and methods. Consultant public health nurses from

*From a paper given at the Regional Conference on Nursing Homes for Regional I and II, United States Department of Health, Education and Welfare, held at East Northfield, Massachusetts, November 12, 13 and 14, 1958.

**Dr. Kinnaman is Commissioner of Nassau County Department of Health, Garden City, New York.

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, *Lancet* 2:347 (Aug. 16) 1958.

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Research in the Service of Medicine

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the outset consult regarding problems of staffing, equipment needed for patient care, record systems and reports. Concurrently the plans are reviewed by the State Department of Social Welfare. When the operator files an application for a license, a joint inspection is made by the state and local regulatory agencies.

The results of these efforts are noteworthy. Homes are in compliance with all laws when they open. Officials know the operator and the operator knows them, and all are working toward common goals. The operators now have a firm conviction that welfare and health personnel will work with them to apply problem solving rather than law enforcement techniques in their mutual attempts to raise standards of care in such homes.

This approach seldom fails but when it does the authorities have recourse to several legal procedures other than prosecution. The timely use of the informal hearing and subsequently, if required, of the formal hearing gets results and still maintains good working relationships between the parties involved.

As soon as a home receives a license, a staff member of the local Department of Public Welfare visits it to arrange for placement of public recipients. Since the Health Department points out to the operator, at the time of his first contact with that office, that he has the privilege, yes, even the responsibility to meet the total community needs — those of private and welfare patients alike — this proposal comes as no surprise.

After a home has a license, the interval between visits by health department personnel varies but never exceeds two months. This frequency of revisitation is possible with the present staff because now there are only 22 nursing and convalescent homes in the county. New operators and operations receive special attention until such time as they prove themselves able and willing to maintain good standards of care at all times. Long-time operators who appear to be complacent or who fail to improve their homes during a license year are the recipients, if not the beneficiaries, of more than average educative and consultative services.

The consultant public health nurse of the licensing agency frequently reviews the nursing needs of patients in the home with the charge nurse and operator and helps them to understand and to appreciate that the quality of professional care is what counts most in a medical care facility.

The Department of Health physical therapists serve patients in nursing homes just as they do those in individual homes, namely; when the physician requests such services. The public health nurse physical thera-

pists help the operators develop a rehabilitation program.

More recently with the aid of the New York State Department of Health, all patients in two of the largest nursing homes, 96 and 70 beds respectively, have had their rehabilitation potential determined by qualified specialists in physical medicine and rehabilitation.

Studies of accidents, even those which do not result in any demonstrable physical injury, have been made for the past fifteen years. The purpose is to find, if possible, the circumstances prevailing at the time of the accident and to eliminate the demonstrated hazards so that accidents are prevented. This approach is coupled with prompt and proper treatment of injured.

Recently one of the private proprietary hospitals in the county has begun construction of a nursing home on its grounds. This makes highly probable the realization of the goal of an easy two-way referral of persons from one type medical care facility to another.

One of the major voluntary hospitals in the County is likely in the near future to do similarly.

Increasingly the Department assists lay and medical people to make placements in accordance with patient needs and the services available in particular homes.

In conclusion, if an enforcement approach rather than a consultative and educative one predominates, then the broad and important health and medical goals of the standard-setting effort can miscarry.

Economic considerations are important. The goal of standard setting is improved care at rates within the reach of those needing nursing home placement. There is abundant evidence that standards can be elevated without jeopardizing the economical delivery, in such homes, of the basic, preventive, medical, health, and social services for the chronically ill and the aged infirm.

The most important effective single means which a populous community can employ to improve standards in nursing homes, is an advisory and consultative service for actual and prospective operators, functioning locally on a full-time basis as a unit of the public agency principally responsible for planning for the care of all of the chronically ill, and having sufficient competent, generalized, and specialized personnel to plan and accomplish its multiple important tasks. Any compromise with this basic approach significantly increases the probability that the community's effort at standard setting will not prevail over the combined forces which tend to hold standards of the general medical care program below minimum desirable levels.

Necrologies

OLIVER W. TURNER, M.D.

1867-1958

Oliver W. Turner, M.D., of Boothbay Harbor, died on November 24, 1958.

Dr. Turner was born in Augusta on December 10, 1867, the son of William H. and Ellen A. (Fogg) Turner. He graduated from Bowdoin College in 1890 and received his medical degree from Jefferson Medical College of Philadelphia in 1893. He did post graduate work in Philadelphia, New York, London, Vienna, Budapest and Berlin.

Practicing in Augusta from 1893 until his retirement in

1946, Dr. Turner was a member of the staffs of the Augusta State Hospital, the Augusta General Hospital, Sisters' Hospital in Waterville, and the Gardiner General Hospital in Gardiner. He specialized in eye, ear, nose and throat.

He was an Honorary Member of the Kennebec County Medical Society and the Maine Medical Association. He also held membership in the American Medical Association.

Dr. Turner is survived by his wife, the former Martha M. Davenport of Bangor.

JAMES H. MACDONALD, M.D.

1892-1958

James H. Macdonald, M.D., of Kennebunk, died December 2, 1958.

Dr. Macdonald was born on August 5, 1892, in Toronto, Canada, son of James and Margaret Jackson Macdonald. He was a graduate of the University of Toronto Medical School and interned in the Toronto General Hospital. He served in World War I as a captain in the medical corps with the Canadian Expeditionary Forces.

Following the war, Dr. Macdonald headed the Disabled Veterans Hospital in Fredericton, New Brunswick. He later moved to Wells where he was connected with the Wells Sanatorium. In 1926 he moved to Kennebunk where he practiced until the time of his death.

Dr. Macdonald had served as a York County medical exam-

iner since 1931. He was a member of the York County Medical Society, the Maine Medical Association and the American Medical Association.

He was awarded the Veteran of Foreign Wars "good citizenship medal" — the highest award that organization can bestow on a non-member. He was a member of the Rotary Club, the Knights Templar, other Masonic groups, Kennebunk Fire Society, Law Enforcement Association, Fish and Game organizations and was a communicant of the Episcopal Church.

Surviving Dr. Macdonald are his widow, the former Helene Burr; a daughter, Mrs. Robert Tolan; a son, James A. Macdonald, and a sister, Mrs. Richard L. Hearn of Queenston, Ontario.

ALBERT A. DARCHE, M.D.

1895-1959

Albert A. Darce, M.D., of Westbrook, died January 13, 1959.

Dr. Darce was born in Sherbrooke, P. Q., Canada on March 5, 1895, the son of George A. and Anatasie Brassard Darce. He attended McGill University, Montreal, and was graduated from the Laval University Medical School, Quebec City, in 1919. He interned at Newbury, Michigan, State Hospital and practiced at Sheldrake, Michigan two years before moving to Biddeford. Dr. Darce stayed two years in Biddeford and in 1924 moved to Westbrook. He served as the S. D. Warren Company mill physician for 18 years, and was on the staff of Mercy Hospital in Portland and Westbrook Hospital. He

also is a veteran of World War I, serving two years in the Canadian Army.

Dr. Darce held membership in the Cumberland County Medical Society, the Maine Medical Association, the American Medical Association and the Board of Industrial Medicine.

A communicant of St. Hyacinth's Church, Dr. Darce was a member of the church's Holy Name Society, the St. John Baptiste Society, Artisans Society and the Catholic Order of Foresters.

Dr. Darce is survived by his widow, the former Orianne Beauchamps; a daughter, Miss Marie Therese Darce and a brother, Omer Darce, Quebec City.

County Society Notes

PENOBSCOT

March 17, 1959

The monthly meeting of the Penobscot County Medical Society was held on March 17, 1959 at the Bangor House. In the absence of Dr. Whitworth, President-elect Albert C. Todd, M.D. presided.

The secretary's report was read and accepted. Dr. McEvoy introduced the speaker of the evening, James W. Mosley, M.D. of the Peter Bent Brigham Hospital who presented a paper on Viral Hepatitis.

Following the speaker of the evening a report was read by the secretary concerning a legislative act now pending, regarding the licensure of nurses. No formal action was taken on this matter.

WARREN G. STROUT, M.D.
Secretary

Edward C. Porter, M.D. was elected to the office of Treasurer of the Penobscot County Medical Society at their January meeting.

YORK

March 11, 1959

The bi-monthly meeting of the York County Medical Society was held at the Wonderbar Steak House in Biddeford, Maine on March 11, 1959.

The records of the previous meeting were read and approved.

Eugene E. O'Donnell, M.D., President of the Maine Medical Association and Daniel F. Hanley, M.D., Executive Director, spoke on matters relative to the state association.

Richard M. Overholt, M.D., of Boston, Massachusetts, gave a very interesting talk on lung and heart surgery. There was a long question and answer period on lung cancer and cigarette smoking.

Thirty-three were present at the meeting. The next meeting will be held in Alfred with Carl E. Richards, M.D., in charge of arrangements and Melvin Bacon, M.D. in charge of the program.

CHARLES W. KINGHORN, M.D.
Secretary

NEW MEMBERS

CUMBERLAND

Peter J. Fennel, M.D., Maine Medical Center, Portland.
Andrew Melkis, M.D., Pineland Hosp., and Train. Ctr., Pownal.

KENNEBEC

Morris J. Seligman, M.D., Veterans Adm., Ctr., Togus.
Harold N. Willard, M.D., Thayer Hospital, Waterville.

DECEASED

WALDO

George W. Holmes, M.D., Waldo County General Hospital, Belfast, March 18, 1959.

COUNTY SOCIETIES

ANDROSCOGGIN

President, Ross W. Green, M.D., Auburn
Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

President, John B. Madigan, M.D., Houlton
Secretary, Clyde I. Swett, M.D., Island Falls

CUMBERLAND

President, Franklin F. Ferguson, M.D., Portland
Secretary, Albert Aranson, M.D., Portland

FRANKLIN

President, Stanley B. Covert, M.D., Kingfield
Secretary, Paul E. Floyd, M.D., Farmington

HANCOCK

President, Arthur M. Joost, Jr., M.D., Bucksport
Secretary, Russell G. Williamson, M.D., Blue Hill

KENNEBEC

President, Howard H. Milliken, M.D., Hallowell
Secretary, Arch H. Morrell, M.D., Augusta

KNOX

President, David V. Mann, M.D., Camden
Secretary, Robert H. Eddy, M.D., Rockland

LINCOLN-SAGadahoc

President, Harry M. Wilson, M.D., Bath
Secretary, Richard I. Clark, M.D., Bath

OXFORD

President, Niles L. Perkins, Jr., M.D., Rumford
Secretary, George W. Miller, M.D., Norway

PENOBSCOT

President, John E. Whitworth, M.D., Bangor
Secretary, Warren G. Strout, M.D., Bangor

PISCATAQUIS

President, Charles H. Lightbody, M.D., Guilford
Secretary, James H. Johnson, Jr., M.D., Milo

SOMERSET

President, Richard P. Laney, M.D., Skowhegan
Secretary, Harland G. Turner, M.D., Norridgewock

WALDO

President, Norman E. Cobb, M.D., Belfast
Secretary, George L. Temple, M.D., Belfast

WASHINGTON

President, Harold G. Sears, M.D., Woodland
Secretary, Karl V. Larson, M.D., East Machias

YORK

President, William E. Dionne, M.D., Springvale
Secretary, C. W. Kinghorn, M.D., Kittery

Announcements

Health Achievement Award Committee

- I. *Subject:* The new Health Achievement Award to be presented for an outstanding contribution to the betterment of citizen and community health made by a group. *We need your help!* We are counting on *you* to bring to the attention of our committee significant health projects or activities which have been developed in various communities throughout the State of Maine.
- II. *Purpose of the Award:* (1) To honor those who have worked in the interest and pursuit of better health for their neighbors, community and State. (2) In honoring deeds of significant health accomplishment, we, thereby, hope that others will be inspired to give of their time, effort, and resourcefulness toward better health for their neighbors and community.
- III. *Types of Health Projects:* Outstanding local projects, inspired, developed and conducted by volunteer groups. Listed below are some specific examples. This list is merely suggestive, and by no means covers the broad range of health projects that might be considered.

Example health projects: Establishment of needed community and school health programs, e.g., well-child conferences, vaccine clinics, school hot-lunch programs, health education in schools, dental projects, such as: fluoridation of public water supplies and dental clinics.

Organized efforts to sponsor scholarships for health careers, campaigns to recruit community doctors and to build needed local clinics, projects geared to helping the handicapped find gainful and dignified employment, blood donor and blood typing programs and services for elderly and bedridden persons.

- IV. *Groups or Organizations which may be Included:* Service groups: i.e., Kiwanis, Elks, Lions, etc., church organizations, P.T.A., veterans' groups, local health councils, chamber of commerce, visiting nurse agencies — (the list is limitless, but these are just a few suggestions). The only groups *not* eligible for consideration are agencies or organizations which are members of the Health Council of Maine.
- V. The Award will be made at the annual meeting of the Health Council of Maine in May. All nominations should be sent to the Award Committee, The Health Council of Maine. Final selection of the winner will be made by the Award Committee.

Annual Health Council Meeting

The Health Council of Maine announces that Dr. Leonard A. Scheele, former Surgeon-General of the U. S. Public Health Service and now president of the Warner-Chilcott Laboratories, will be the chief speaker at its annual meeting to be held at the Augusta House at 6:30 p.m., Friday, May 15.

Doctor Scheele has most recently been chairman of the National Commission on Health Careers, and will speak on the vital subject of "The Health Manpower Needs of the Nation."

In addition to Dr. Scheele's talk, the Health Council will present for the first time its Annual Health Achievement Award to the community group or organization making an outstanding contribution to the betterment of citizen and community health. All physicians are cordially invited to attend.

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Maine Chapter American Academy of General Practice

Spring Clinical Meeting — Saturday, May 9, 1959 — Thayer Hospital, Waterville, Maine.

- 9:00 a.m. Registration
- 10:00 a.m. Physical Examination of the Infant
Edmund N. Ervin, M.D., Thayer Hospital
- 10:30 a.m. Rehabilitation
Harold N. Willard, M.D., Thayer Hospital
- 11:00 a.m. Hiatus Hernia
Richard H. Hornberger, M.D., Thayer Hospital
- 11:30 a.m. Low Backache — Panel
Earle M. Davis, M.D., Thayer Hospital, Urologist
Joseph H. Giesen, M.D., Thayer Hospital, Orthopedist
Daniel A. Rock, M.D., Central Maine General Hospital, Lewiston, Maine, Neurosurgeon
Kenneth W. Sewal, M.D., Thayer Hospital, Gynecologist
- 12:30 p.m. Luncheon
- 1:30 p.m. Apoplexy and Recent Developments
Raymond D. Adams, M.D., Massachusetts General Hospital, Boston, Mass.
- 2:30 p.m. Chemotherapy in Advanced Malignancy
George C. Escher, M.D., Memorial Center for Cancer and Allied Diseases, New York, N. Y.
- 3:30 p.m. Coffee Break
- 4:00 p.m. The Otolaryngologist and the General Practitioner
Frederick T. Hill, M.D., Thayer Hospital
- 4:30 p.m. Roentgenography in Gastro-Intestinal Disease
Albert A. Poulin, M.D., Sisters Hospital

Pediatric Refresher Courses

A series of Short Refresher Courses will be given during May and June, 1959, by the Children's Hospital of Philadelphia and by the Graduate School of Medicine, University of Pennsylvania.

1. PEDIATRIC ADVANCES, conducted by the Staff of The Children's Hospital of Philadelphia, will be held on May 25 through 29, 1959. The curriculum will consist of clinics, demonstrations and panel discussions in selected aspects of contemporary pediatrics in which important advances are being made. Interested physicians are urged to apply early, since total attendance is limited. Registration fee will be refunded if the registrant later finds it impossible to attend. Tuition is \$115.00.
2. PRACTICAL PEDIATRIC HEMATOLOGY, on June 1 through 5, 1959, will be conducted by Irving J. Wolman, M.D., Thomas R. Boggs, Jr., M.D. and other members of the Hematology Department of the Children's Hospital of Philadelphia. The program on June 4 and 5 will be devoted to Problems of Blood Grouping, Neonatal Jaundice, Kernicterus and Exchange Transfusions. Physicians may register for these two days only, if they desire. Tuition for the full course is \$125.00 and for the last two days it is \$50.00. An illustrative collection of 25 abnormal blood and bone marrow slides has been prepared. These are available for purchase: \$10.00 for registrants; \$15.00 for non-registrants.

Inquiries should be addressed to Irving J. Wolman, M.D., Director of Post-Graduate Education, The Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46, Pennsylvania.



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14	15	16	17	18	19	20	
→ 21	22	23	24	25	26	27	
28	29	30					

106th Annual Session
of the
Maine Medical Association

THE SAMOSET, ROCKLAND, MAINE

Summer School of Alcohol Studies

The Summer School of Alcohol Studies of the Laboratory of Applied Biodynamics, Yale University, will hold its seventeenth annual session in 1959 during the 4-week period June 28 through July 23 inclusive. The course is offered specifically for Public Health Physicians and Administrators, Public Health Nurses and Supervisors, Public Health Educators, and Community Mental Health Specialists.

For a prospectus describing the course, address: The Registrar, 52 Hillhouse Avenue, Yale Station, New Haven, Connecticut.

National Tuberculosis Association Annual Meeting

The Annual Meeting of the National Tuberculosis Association and its medical section, the American Trudeau Society, will be held May 25 through 28 at the Palmer House in Chicago, Illinois. For further information write Miss Agnes Fahy, National Tuberculosis Association, 1790 Broadway, New York 19, New York.

The American Academy of Arts and Sciences Monograph Prizes

The American Academy of Arts and Sciences announces that three prizes of \$1,000 each will be awarded annually to the authors of especially meritorious unpublished monographs in the fields of the Humanities, Social Sciences and Physical and Biological Sciences. A Monograph is defined for the purposes of these awards as a "scholarly contribution to knowledge, too long for an article in a learned journal and too specialized or too short for a general book." The final date in

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Current Concepts In Vascular Surgery II. Aneurysms Of The Aorta

ELIE D. ABOULAFIA, M.D.* and ALLAN D. CALLOW, M.D.**

INTRODUCTION

The most important clinical feature of aortic aneurysms is the extremely high mortality rate associated with their presence. In the majority of cases death is due to rupture of the aneurysm which occurs within a relatively short time after development of symptoms. In the absence of adequate preventive or conservative therapy, it is understandable that this disease became a challenge to surgeons. Many operative procedures have been devised for the treatment of aortic aneurysms. Until a few years ago, such procedures consisted of attempts to reinforce the weakened arterial wall, stimulate clot formation within the aneurysm or resection of the involved segment without attempt at reestablishing the flow of blood to the periphery. In time, all these methods, when applied to aneurysms of the aorta, proved uniformly disappointing.

The clinical application of grafting procedures to the treatment of aortic aneurysms made it possible for surgeons to extirpate the diseased segment and reestablish continuity of blood flow through a non-diseased substitute channel. Dubost and his associates²⁹ were the first to report successful excision of an aortic aneurysm and insertion of a graft, in 1951. During

the past eight years, these operations have had a wide clinical trial and most patients have had a relief of symptoms and increase in life expectancy.

When left untreated, aneurysms of the aorta often cause severely distressing symptoms and represent a constant threat to life. The great majority of patients so afflicted die from hemorrhage due to rupture of the aneurysm. The life expectancy of patients who have aortic aneurysms is usually from a few months to three years from the time of onset of symptoms, being shorter for thoracic aneurysms than for abdominal ones. Some abdominal aneurysms may exist for many years without manifesting any clinical evidence of their presence, especially when small, however larger ones (over 6 cm. in diameter) usually cause symptoms and usually end up by rupturing. Thoracic aortic aneurysms usually cause early symptoms and have a more rapid progression of the disease. In view of the poor prognosis without surgery, all diagnosed cases should be considered as potential surgical cases and should be evaluated for surgery. Grafting procedures, when combined with excision of the aneurysms, have definitely been proven to be the best way to manage these lesions at present. As we shall see later, recent reports indicate that well planned operative management has justified the hopes that grafting procedures would be definitive and curative. There is increasing evidence that such procedures influence favorably the life expectancy in operated cases. With increasing experience even further improvement in prognosis is forthcoming. Because of these recent developments in the management of aortic aneurysms,

*Research Fellow in Surgery, New England Center Hospital. Supported in part by the "Worcester North Chapter Fellowship for Research in Vascular Surgery at the New England Center Hospital" — a Chapter of the Massachusetts Heart Association.

**Associate Professor of Surgery, Tufts University School of Medicine. Surgeon, New England Center Hospital.

the importance of early diagnosis and treatment cannot be overemphasized.

Aneurysms of the aorta can be classified according to their underlying disease process (atherosclerosis, syphilis etc.), biologic behaviour, shape (fusiform, saccular, dissecting) or anatomical location. From surgical point of view it is more convenient to classify them by location and shape, since biologic and technical considerations of treatment are influenced by the location as well as the shape of the aneurysm. For purpose of presentation, we shall deal separately with:

- a. aneurysms of the thoracic aorta, and
- b. aneurysms of the abdominal aorta.

ANEURYSMS OF THE THORACIC AORTA

Syphilitic mesoaortitis has been classically considered as the most common cause of thoracic aortic aneurysms.³⁰ This is probably no longer true and recent series stress the predominance of atherosclerosis as the main etiologic factor.^{31,32} Such change in thinking is due to an actual decrease in number of cases of syphilis as well as to increase in numbers of our aged population who are frequently afflicted by degenerative diseases. This is of particular significance since luetic aneurysms are commonly encountered in the ascending aorta and proximal arch, a particularly unfortunate location for surgical therapy. Arteriosclerotic aneurysms are more frequently met in the distal arch and descending aorta and are thus more readily accessible. Another point of interest is that saccular aneurysms are mostly luetic, while atherosclerotic ones are usually fusiform, but both of these disease processes sometimes coexist in the same aneurysm.

Congenital aneurysms are frequently seen in the thoracic aorta. They are often associated with other congenital anomalies such as coarctation or sub-aortic stenosis.³³ Other forms of congenital aneurysms such as those that involve a portion of the aorta where the ligamentum arteriosus originates, are quite rare. It is a matter of debate whether the latter are true aortic aneurysms or dilatations of the proximal portion of a ductus arteriosus.

Traumatic aneurysms are due to penetrating wounds of the thorax (some of them are "false aneurysms") or to severe blunt injuries which usually are not accompanied by fractured ribs. At times it becomes exceedingly difficult to ascertain the direct relationship between severe injury to the chest wall and the subsequent presence of an aneurysm — a point of considerable potential medico-legal importance. Aneurysms due to blunt trauma occur almost invariably at the same anatomical location, i.e. just distal to the origin of the left subclavian artery. Rapid deceleration has also been incriminated as a possible cause of aneurysm formation.³⁴

SYMPTOMS AND SIGNS

Symptoms vary considerably, depending on the size and location of the aneurysm, presence of acute changes

within the aneurysmal wall and the coexistence of other closely related diseases. Most symptoms are due to the compression of neighboring organs by the aneurysm. For this reason, the patients usually complain of symptoms that may direct the physician's attention to investigating other organs first. In as much as the presence of aneurysms of the thoracic aorta may simulate some very different diseases, it is of interest and importance to evaluate some of the presenting complaints:

Cough is a frequent manifestation and is usually due to compression of the trachea or of a main stem bronchus. If compression is severe, some symptoms of major respiratory embarrassment may appear. *Dyspnea* and *cyanosis* can be encountered.

One of the commonest complaints associated with aneurysms of the thoracic aorta is *dysphagia*. This is particularly true when the descending aorta is involved. Ellis and his associates³⁵ found that loss of appetite was the most important manifestation of aneurysms in this location.

Hoarseness and *aphonia* when present, point to involvement of the left recurrent laryngeal nerve. Laryngoscopic examination may reveal actual paralysis of the vocal cords.

Vascular manifestations are common. Engorgement of the neck veins due to interference with the return flow in the superior vena cava, unilateral edema of an upper extremity or symptoms of vascular insufficiency of an upper extremity have been described. Indeed, the presence of a dissecting aneurysm where the dissection involves the origin of the innominate artery, left carotid or left subclavian artery, may give rise to the changes encountered in a true "pulseless disease."

Horner's syndrome, when present, suggests compression of a stellate ganglion by the aneurysm.

Pain is a prominent feature of thoracic aortic aneurysms and can be excruciating in the late stages of the disease. Pain may be of the radicular distribution variety, may be referred to the back when erosion of the thoracic vertebrae is present, or may be precordial. The latter instance may simulate the pain of myocardial infarction.⁴⁸ Such severe pain is of grave prognostic significance since it usually corresponds to serious changes within the aneurysmal wall such as dissecting hemorrhage, acute dilatation, thrombosis of a main branch or impending rupture.

Rarely, the first manifestation is that of *severe vascular collapse* seen with rupture of the aneurysm, leading almost invariably to fatal hemorrhage. Such hemorrhage may be visible if rupture occurs through the eroded chest wall, into a bronchus, trachea or esophagus with resulting *hemoptysis* or *hematemesis*. *Cardiac decompensation* is usually not a symptom of aortic aneurysms. When it is present, it points to the coexistence of other disease such as coronary insufficiency, luetic valvular disease, sub-aortic stenosis, etc.

We have enumerated some of the commonly encountered symptoms in presence of thoracic aortic aneurysms, so as to impress the fact that these aneurysms are characterized by a variety of puzzling and non-specific complaints. These symptoms, usually appear early in the disease, and only in rare instances the diagnosis is first made on routine chest film in absence of any complaints.

Clinical findings by physical examination may be pronounced or totally absent as they depend on the size and location of the aneurysm. Murmurs and bruits of extra-cardiac origin with definite systolic timing are sometimes heard. A thrill or a thrust is often palpable, particularly along the upper right sternal border or over the back, medial to the left scapula. Increased retrosternal dullness has been described as a classic finding, but at times this may be impossible to demonstrate. Differences in the amplitude of the radial pulses is occasionally detected. Other findings are not specific and usually are those of other space occupying lesions in the mediastinum. When erosion of the chest wall has occurred, visible pulsations immediately suggest the diagnosis. A picture of thoracic aortic aneurysm which has eroded the chest wall is to be found in most textbooks of physical diagnosis, but less frequently in practice.

DIAGNOSIS

Aneurysms of the thoracic aorta should be ruled out in establishing a diagnosis of any other mediastinal tumor. This is of particular importance when endoscopic examinations are contemplated. Attempting bronchoscopy or esophagoscopy in the presence of unsuspected aneurysm of the thoracic aorta may indeed culminate in catastrophe.

Roentgen films of the chest are very valuable in establishing the diagnosis. Of special importance are the oblique views which can help localize the lesion fairly accurately. Fluoroscopy, with or without barium swallow, can also yield some very important information. The presence of pulsations, alone, in a mediastinal shadow has been found to be an unreliable diagnostic sign as other tumors when compressed against a normal aorta can exhibit this phenomenon in the course of fluoroscopic examination. The diagnosis and extent of involvement of the aorta, are established preoperatively with greatest accuracy by angiocardiology which can also yield valuable data for planning the operative approach. Various techniques for radiologic visualization of the thoracic aorta have been described.⁴⁹ At times, the diagnosis can only be established by exploratory thoracotomy. Some surgeons are reluctant to use aortographic diagnostic procedures and prefer exploratory thoracotomy even in cases where additional information may be obtained by radio-opaque injection techniques. The reason for this stand is that severe complications subsequent to aortography have been reported.

TREATMENT

Surgical intervention affords at present the only means of obtaining a cure, and should be prescribed in all cases where there is no definite contraindication. Since prognosis for life is so poor in patients who have thoracic aortic aneurysms, contraindications to surgery are limited to the presence of concomitant disease which in itself will prove fatal within a short time (such as disseminated metastatic disease) or inability to tolerate anesthesia. Age by itself is not a deterrent to operation.

When the aneurysm is saccular and the remainder of the aortic wall at the level of the lesion appears healthy, the sac may be excised by lateral aortorrhaphy without interruption of the distal circulation (Fig. 4). This is frequently the case when managing luetic aneurysms. The sac is excised at its neck and the defect created in the wall is simply closed by either interrupted or continuous sutures. It should be mentioned that this method of lateral aortorrhaphy has been at times followed by disruption of the suture line especially in saccular aneurysms of atherosclerotic origin. This is probably the result of actual extension of the disease process beyond what appear to be healthy margins.

When treating fusiform aneurysms, the entire circumference of the aorta at the involved level must be resected.³⁷ Such resection poses serious problems. The thoracic aorta cannot be cross-clamped proximal to the left carotid artery without risk of death by cerebral anoxia. Other segments of the thoracic aorta cannot be cross-clamped for more than a few minutes without risk of renal or spinal cord complications. Excision of the entire descending aorta is followed by permanent symptoms and the clinical findings of transverse myelitis due to interference with the blood supply to the spinal cord. Hypothermia has helped to reduce materially such complications and prolong the allowable time of anoxia, but this still does not guarantee against complications or death.

In order to perform these long operations with relative safety, a temporary by-pass to permit flow of blood to peripheral vital organs must be established (Fig. 5). Cooley and his associates have successfully employed extra-corporal circulation to by-pass the aortic arch by perfusing the carotid arteries directly.³⁸ Lillehei and his associates⁴⁸ have used extra-corporal circulation combined with potassium asystole in repairing aneurysms of the sinus of Valsalva. Such advances in operative technique have permitted operative attack upon practically every inch of the aorta. Only after a safe by-pass has been established can cross-clamping of the aorta, resection of the aneurysm and insertion of a graft be attempted. Conklin and his associates³⁹ suggested the use of a permanent shunt without graft replacement, whenever possible, thus considerably shortening the time of operation. Patients with aneurysms distal to a coarctation usually do not require a by-pass for safe excision of the aneurysm since they already have an abundant collateral circulation.

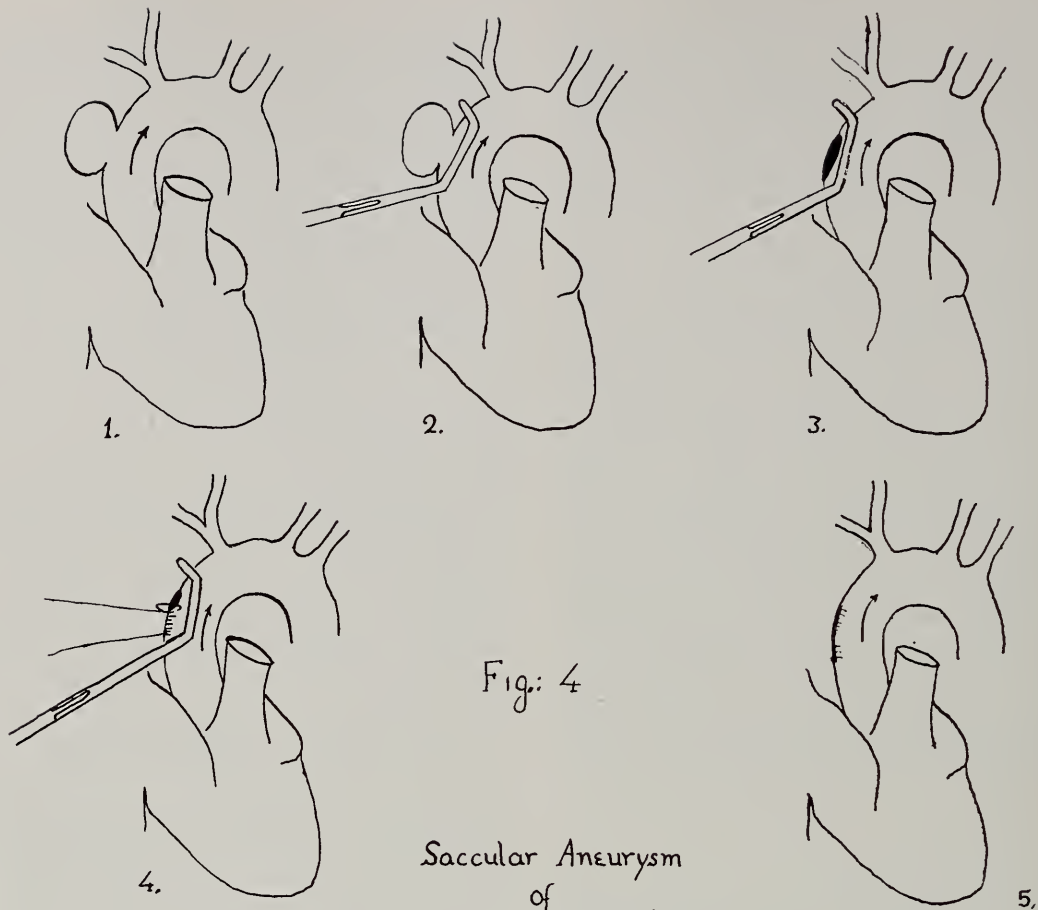


Fig. 4

Saccular Aneurysm
of
The Ascending Aorta:

Excision by lateral aortorrhaphy without interruption of
the circulation.



Several procedures have been devised for managing dissecting aneurysms. In general, they consist of attempts to arrest further dissection as well as to re-direct the blood flow from within the wall into the lumen of the aorta. These procedures are quite complex and are not entirely satisfactory. The need for them is obvious in cases where dissection of the aortic wall extends over a long segment making a total resection unsafe.

RESULTS OF TREATMENT

From what has been said, it is obvious that operative procedures of resection and graft replacement of aortic aneurysms within the thorax, pose a multitude of technical problems, are time consuming, and require a well trained surgical team for their success. When the operation is successful, the patient can look forward to relief of symptoms and prolongation of his life expectancy. Operative mortality varies considerably in reported series, depending mostly on the location of the aneurysm and whether rupture has occurred or not. The average operative mortality in most series is around twenty per cent. This figure should be contrasted with the fact that in a large series of thoracic aortic aneu-

rysms by Kampmeier⁴⁰ the average life expectancy for non-operated cases was from six to nine months from the onset of symptoms.

A considerable proportion of operative deaths was due to complications stemming from the type of the graft. Rupture of homografts post-operatively has been well documented in several instances. Longer term follow up reports suggest that late complications are also more frequent with homografts than with artificial grafts.^{41,42} As we have previously pointed out, perfection of synthetic grafts is imminent and should further decrease the incidence of failures attributable to the grafts, and further improve the outlook for patients with aneurysms of the thoracic aorta.

ANEURYSMS OF THE ABDOMINAL AORTA

By far the commonest cause of these aneurysms is atherosclerosis. It is best, for practical purposes, to limit our discussion to this variety. These aneurysms are usually fusiform and arise distal to the origin of the renal arteries, although not exclusively so. Involvement of one or both common iliac arteries is encountered quite frequently. Thrombosis within the lumen, hemorrhage within the wall and calcifications are seen often.

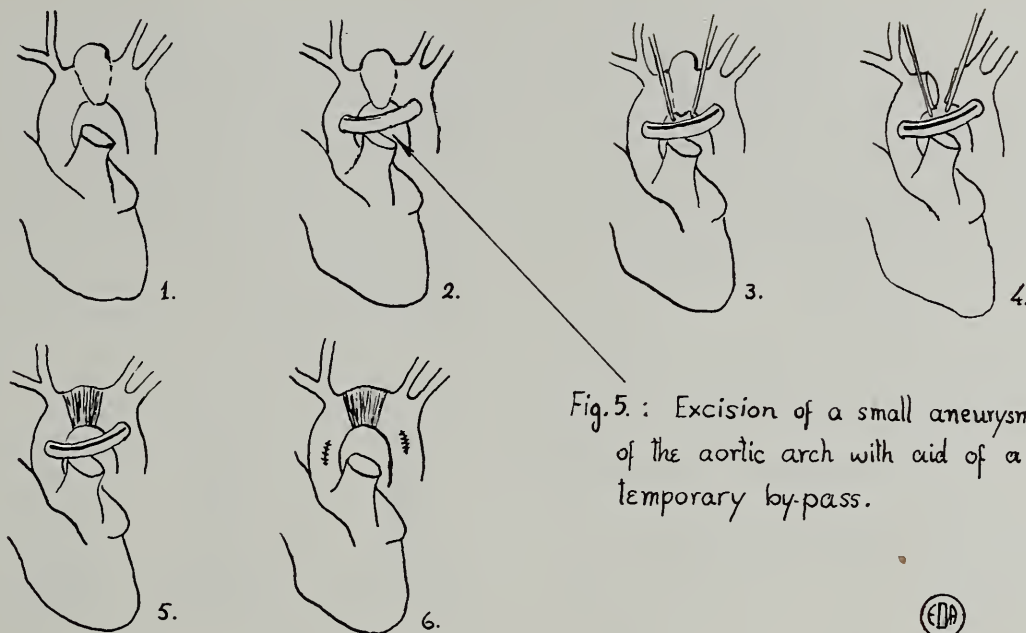


Fig. 5: Excision of a small aneurysm of the aortic arch with aid of a temporary by-pass.

(EDA)

Atherosclerotic aneurysms of the abdominal aorta are frequently accompanied by manifestations of atherosclerosis elsewhere in the body. Coronary and cerebral atherosclerosis are often aggravating factors, but in themselves do not pose the same threat to life that an abdominal aneurysm does. Thus, prime consideration should be given to the latter. According to Estes⁴³ death due to rupture of the aneurysm occurs in eighty per cent of patients within three years from the time of appearance of the aneurysm. Because of the very high percentage of successful results achieved by resection and grafting in managing this disease, it is imperative that treatment be applied early.

SYMPTOMS AND SIGNS

Contrary to aneurysms of the thoracic aorta, aneurysms of the abdominal aorta are frequently present without any distressing symptoms. One of us⁴⁴, has previously insisted on the lack of relationship between symptoms and ultimate prognosis in aneurysms of the abdominal aorta. Quite often, the first symptoms may not appear till only a few days before rupture of the aneurysm occurs. On the other hand, patients with severe symptoms may survive for many years.

Pain is the prominent symptom of this disease. Low-back ache is the most common complaint with radicular pain a close second. By corresponding dermatome distribution, pain may be sometimes referred and then simulate intraperitoneal disease. Intermittent claudications of the calf or hip may be the first symptom to direct investigation of the vascular system. Acute exacerbations of pain usually signal the occurrence of acute processes within the aneurysmal wall and the impending rupture. When very severe pain is accompanied by a picture of hemorrhagic shock and the presence of expanding abdominal mass, rupture has already occurred and only immediate surgical intervention and efficient

supportive care may still prove timely in saving the patient's life. It is noteworthy that by the time one is able to palpate an expanding abdominal mass, considerable blood must have been extravasated already into the retroperitoneum. Hematemesis and melena have been described as symptoms of aneurysms that have ruptured into the gastrointestinal tract and in particular into the duodenum. In the event that symptoms have appeared following a laminectomy, one must entertain the possibility of dealing with an arteriovenous fistula, rather than an aneurysm.³⁶

The cardinal physical sign indicating the presence of an abdominal aortic aneurysm is palpation of a *pulsatile abdominal mass*, usually just above the umbilicus and to the left of the mid-line. Bruits and murmurs may be heard at times.

DIAGNOSIS

The above mentioned signs may be hard to detect in the obese individual. On the other hand, the diagnosis can be erroneously made when not warranted. An abdominal tumor compressed against a normal aorta may transmit normal pulsations, and lead to the mistaken impression of feeling a pulsating mass. Such tumors, when intraperitoneal, can usually be distinguished from an aortic aneurysm by careful palpation. Retroperitoneal tumors and especially sarcomas of the periaortic lymph nodes can cause a great deal of uncertainty before a diagnosis is definitely established. A word of caution must be inserted at this point about the necessary gentleness of palpation in evaluating pulsating tumors in the abdomen; rupture during examination can occur if palpation is too vigorous.

The discovery of abnormal calcifications in the region of the abdominal aorta on abdominal or lumbar spine Roentgen films, should prompt a careful examination for the possible presence of an aortic aneurysm.

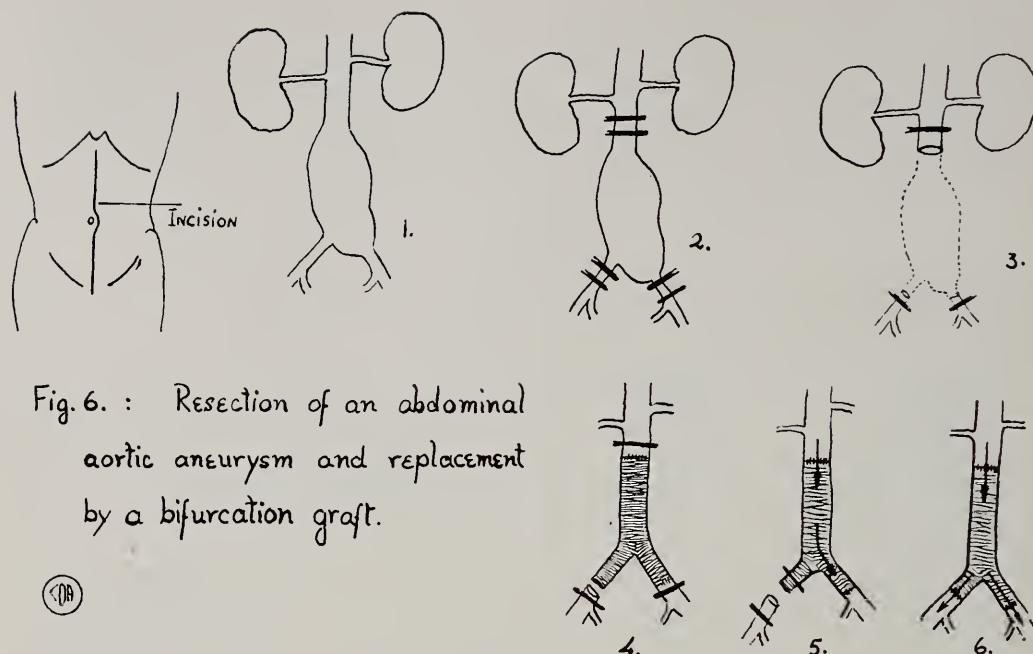


Fig. 6. : Resection of an abdominal aortic aneurysm and replacement by a bifurcation graft.

In the diagnosis of abdominal aortic aneurysms, aortography is rarely helpful, usually unnecessary and at times may cause very serious complications. We have abandoned the use of aortography, in abdominal aneurysms, several years ago. Some important information regarding the extent of the disease can sometimes be obtained by pyelography.

TREATMENT

Once diagnosis of aneurysm of the abdominal aorta has been established, treatment is dictated in terms of excision and graft replacement. The exact choice of operative approach depends, naturally, on the extent of the disease process. As previously mentioned, in most instances, the aneurysm is found distal to the origin of the renal arteries and rarely extends more than to involve the proximal portion of one or both common iliac arteries. Since the excision of the aortic bifurcation is becoming a common place occurrence, we shall presently familiarize the reader with the highlights of the operative procedure. (FIG. 6.)

The approach is through a transperitoneal incision extending from the sternal xiphoid to the symphysis pubis. The small bowel is exteriorized, the ascending colon is packed to the right and the descending colon and sigmoid are retracted to the left of the field, to allow free access to the posterior peritoneum which is slit vertically over the aorta after the duodenum has been mobilized. Meticulous dissection of the aneurysm is then begun. The renal arteries on both sides must be positively identified early in the dissection, since anatomical variations in numbers or location where the renal arteries originate close to the bifurcation do occur, and unless previously identified, may be mistaken for lumbar branches, inadvertently ligated with resulting death from uremia. When the dissection is completed,

the aorta above, and the iliac arteries below the lesion are cross-clamped and the aneurysm excised. A free cuff of healthy artery must be left intact to facilitate performance of an adequate anastomosis. A bifurcation graft to replace the diseased aortic segment is then inserted. The proximal anastomosis is performed first, followed by that of the iliac arteries. As soon as one common iliac is anastomosed, and after evacuating air from the graft, blood is allowed to flow to the corresponding extremity. When the other iliac artery has been anastomosed, the remaining clamps are removed and flow of blood to the remaining extremity is re-established. Oozing is usually minimal, and can be easily controlled by pressure for a few minutes.

Whether heparin should be injected into the iliac arteries distal to the occluding clamps, is debatable. Segmental heparinization without elevation of the clotting time in the entire vascular tree, is a theoretically desirable feature. Its actual existence has been recently challenged by Gryski and his co-workers.⁴⁵

When the aneurysm extends proximally above the renal arteries and involves them or other major intra-abdominal arterial trunk that cannot be sacrificed, a shunt has to be established to maintain blood flow to the corresponding organs, before the aorta may be cross-clamped.^{50,51} This complicates the operative procedure, considerably, but fortunately such involvement is quite rare (about 3% of abdominal aneurysms).

RESULTS OF TREATMENT

Regardless of the nature of arterial graft used, in bridging defects in the abdominal aorta, the operative results are good and the mortality rate is low. Five per cent is the average representation of mortality from all causes in elective grafting procedures. This figure should be multiplied several times when the operation

is performed after the aneurysm has ruptured. De Bakey and his associates, have recently reported a series of 56 patients who were treated in 1956 by excision and graft replacement. In their series there was only one operative death (less than 2%). In their 1952 series, the same authors had a mortality rate of 25% for similar operations.³² Longer term follow-up studies are testifying to the superiority of prosthetic substitutes, as compared with homografts, in regard to late degenerative changes in the graft. Several instances of rupture of a homograft have been reported. To our knowledge there is only one published case of late fatal rupture of a synthetic graft in the abdominal aorta, made of a widely used fabric. Such a complication has been reported by Ohara and Nakano⁴⁶ concerning a Nylon graft that ruptured one year after it had been inserted. It is interesting to note, that these authors used a Japanese graft which by United States' standards would have been judged inadequate. Longer follow-up studies will help establish the ultimate superiority of a particular synthetic graft.

The supremacy of aortic grafting procedures in treating aneurysms of the abdominal aorta, is definitely established. In spite of the relatively short time (eight years) that elapsed since their introduction, available data is already convincing. In a large series of patients so treated, the three years survival rate is 70%.³² This figure includes all causes of death, and is far better than those reported before current use of grafts. With increasing experience, it is certain that the therapeutic success of extirpation and graft replacement of aneurysms of the abdominal aorta, is affording a reasonable solution to the problems of these highly fatal diseases.

CONCLUSIONS

Considerable progress has been made in recent years in managing aortic aneurysms. The introduction of grafting procedures has resulted in marked improvement in prognosis for life and for relief of symptoms. Naturally, ultimately, individual cases will continue to depend upon early diagnosis and meticulous appraisal of the specific problems involved. Experience with excisional therapy with grafting permits the application of some general rules to management of patients with aortic aneurysms:

1. Mortality rate is definitely higher in non-operated cases.
2. Mortality rate decreases as the lesion is situated further away from the aortic valves. It is highest for the ascending aorta and lowest for lesions below the origin of the renal arteries.
3. Associated severe hypertension is a poor prognostic sign.
4. Operative mortality and long term survival are both adversely influenced by age. This relationship is real and not just apparent.
5. Patients with dissecting aneurysms have poorer survival rate. There is a tendency for recurrence of the disease process in the same or other seg-

ment of the aorta. Furthermore, dissecting aneurysms are often accompanied by manifestations of associated congenital anomalies.⁴⁷

6. The advantages of elective surgery are obviously to be preferred to waiting for the aneurysm to rupture. A high index of suspicion and the careful analysis of symptoms and clinical findings are our best guide toward an aggressive approach to further reduce the mortality rate.

SUMMARY

A general review of the subject of aortic aneurysms in the light of current surgical therapy has been presented. Symptoms, signs, diagnostic considerations, treatment and results of treatment have been separately discussed for the thoracic aorta and abdominal aorta. The great progress made in the past few years in treating patients with aortic aneurysms, makes it imperative for practicing physicians to be familiar with them, and apply this knowledge toward further reduction in mortality rate.

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Steatorrhea (A Clinical Problem)

IRVING J. POLINER, M.D.*

Steatorrhea is usually the most prominent manifestation in a large group of diseases that might better be termed "small-bowel malabsorptive syndromes." For many years, however, clinicians have looked for fat in the stools as a means for establishing the diagnosis of malabsorption. Sometimes the diagnosis may be difficult and, occasionally, more than one syndrome may be present in the same patient. Steatorrhea in the adult is defined as excretion of greater than 5% of ingested fat in the stool. Studies are made while the patient is kept on a constant standard diet, usually containing 100 grams of fat.¹ Recently some centers have suggested using 50 grams of fat.

ABSORPTION OF FAT²

For fat to be absorbed, there must be adequate mixing with bile, pancreatic and small-bowel enzymes, followed by emulsification into fine droplets, and finally the biochemical change to monoglycerides and free fatty acids. Lipase, the fat-splitting enzyme, is predominately produced by the pancreas and acts after bile has emulsified the fat into small droplets. Fat and its products are then absorbed by the small bowel mucosal cells, transported by way of the lacteals (lymphatic channels) and the portal venous system. Newer studies suggest that monoglycerides or free fatty acids are easily absorbed, but diglycerides and triglycerides are not. Most of the fatty acids with ten or more carbon atoms are reformed into new triglycerides in the mucosal cells of the small bowel and then carried by way of the lymphatic system. Shorter carbon chain fatty acids are unchanged and carried through the portal system. Unsaturated liquid fats are more readily absorbed than the saturated long-chain fatty acids.

Emulsification usually yields droplets of 0.5 microns or less. Particles larger than this are not absorbed. Even though bile and pancreatic lipase are necessary, considerable fat can be absorbed without them. The importance of small-bowel motility in the absorption process remains unclear.

A small amount of fat is always found in the stool. This comes mainly from the desquamation small-bowel cells.

METHODS FOR DETERMINING STEATORRHEA³

The amount of fat in steatorrhea may vary widely. At times it may not be clinically detectable, only bio-

chemically. Diarrhea may even be absent. The experienced clinician often suspects steatorrhea by the stools rancid odor and its gross appearance, silvery gray or creamy yellow. All hospital laboratories are equipped to do microscopic stains. The stool fat must be hydrolyzed, however, with glacial acetic acid and heat prior to staining with Sudan III; thus, fat in the form of soaps are changed to free fatty acids and then stained. Finally, a balance study, with the patient on a constant amount of fat and collecting all stools, may be necessary to detect mild steatorrhea and to quantitate the amount of fat lost. This is the most accurate method and should cover at least three days and preferably more.

Older tests (such as Vitamin A test, glucose tolerance test, fasting carotene blood levels, water diuresis, amino acid tolerance test, starch tolerance test, chylomicron counts, blood lipids, folic acid absorption test) and newer tests (such as detecting I 131 labeled triolein and/or oleic acid in a 2 or 3 day stool collection, I 131 protein absorption; fecal radioiron; Vitamin B 12 Co 60 in the stool or urine or over the liver, without and with intrinsic factor, serum lipid optical density, and 5-hour urinary excretion of d-xylose) have not added to or been more accurate than the fat balance study. They should be used only as screening procedures.

CLASSIFICATION OF STEATORRHEAS

- I. Surgical Procedures on the Stomach
 - (a) Gastroenterostomy
 - (b) Subtotal Gastrectomy
 - (c) Total Gastrectomy
- II. Inadequate Bile Salts (Emulsification)
 - (a) Obstructive Jaundice (Cancer, Stone, Stricture)
 - (b) Severe Liver Disease (Decrease production)
- III. Inadequate Pancreatic Lipase (Lipolysis)
 - (a) Obstruction of Pancreatic Duct (Cancer, Gall Stone, Fibrosis)
 - (b) Chronic Pancreatitis
 - (c) Congenital Cystic Fibrosis
 - (d) Fistula
- IV. Defect in the Small Bowel
 - (1) Decrease Area
 - (a) Surgical Resection
 - (b) Internal Fistula
 - (2) Mucosal Disease
 - (a) Inflammatory — Regional Enteritis
— Tuberculosis
 - (b) Neoplastic — Lymphosarcoma,
Lymphoma

*Junior Visiting Physician, Maine Medical Center, Portland, Maine; Consultant in Gastroenterology, Veterans' Administration Hospital, Togus, Maine.

- (c) Malfunction of Mucosal Cells
 - Celiac Disease — Infants
 - Non-Tropical Sprue — Adults
 - Severe Starvation
 - Dysfunction associated with intestinal infections
 - After neomycin

V. Obstruction of Mesenteric Lymphatics

- (1) Whipple's Disease
- (2) Lymphoma, Carcinoma

VI. Miscellaneous

- (1) Amyloid
- (2) Scleroderma
- (3) Blind Loops
- (4) Strictures
- (5) Diverticula
- (6) Mesenteric Artery Thrombosis
- (7) Ulcerogenic Tumor of the Pancreas

TREATMENT

The treatment of choice varies with the disease. In all types of steatorrhea some general principles apply. Fat is not contraindicated. Increasing the dietary fat may increase the fat in the stool, but it also increases the amount of fat absorbed. Adequate protein and carbohydrate are necessary. All vitamins, especially the fat soluble vitamins, should be given orally in water soluble form and even intramuscularly. Calcium, Vitamin D, iron (intramuscularly), Vitamin B 12, Vitamin K, folic acid, electrolytes, and anticholinergic drugs are all helpful and should be used.

DISCUSSION

The etiology of the steatorrhea is often obvious and clinically it is most commonly seen following subtotal or total gastrectomy, obstructive jaundice, pancreatic insufficiency (usually chronic pancreatitis), lymphoma involving small bowel lymphatics, and non-tropical sprue. However, laparotomy, which is a relatively benign procedure, is frequently necessary both for diagnosis and treatment. In 1956 a per oral tube was fashioned to biopsy the small bowel mucosa.⁴ Numerous biopsies have shown a consistent picture of villous atrophy in adult non-tropical sprue and in one case of childhood-coeliac disease.^{5*} This procedure appears to offer the simplest method of differentiating non-tropical sprue from chronic pancreatitis. This biopsy method also has confirmed the diagnosis of Whipple's Disease.⁶

Steatorrhea following subtotal or total gastrectomy is poorly understood. It has been suggested that insufficient mixing of bile and/or pancreatic juice with food (following a gastric-jejunal or esophageal-jejunal anastomosis) is the cause. However, the addition of bile salts and/or pancreatin with food,⁷ or surgically connecting the hemigastrectomy or esophagus to the duodenum does not always correct this problem.⁸

*Since this paper was written, a biopsy done on a 6-year-old girl with coeliac disease showed villous atrophy.

Obstructive jaundice is almost always a surgical problem. Bile salts in large doses with meals may be used as temporary replacement.

Pancreatic insufficiency (chronic pancreatitis) may exist in all degrees.⁹ Fortunately, steatorrhea does not occur until almost all of the lipase is absent. The problem of substitution is simple, but usually inadequate. Pancreatin in doses of 15 to 25 grams per day with meals must be given for effective replacement.

Lymphoma and lymphosarcoma of the small bowel are treated best by the internist and surgeon coordinately, the steatorrhea usually being the minor problem.

Non-tropical sprue is not rare. Mild variants may be present and asymptomatic for years until a "flare-up" occurs. It has become increasingly evident that coeliac disease in infants and non-tropical sprue in adults are the same disease.⁵ The etiology remains unknown. In recent years gluten in the diet has been found to cause symptomatic exacerbation.¹⁰ Removal of the offending product has been associated with striking remissions. Steroids have been used also and have helped in some cases.¹¹

Finally, one disease may cause steatorrhea in more than one way; i.e., carcinoma of the ampulla of Vater causing obstruction to both bile salts and pancreatic lipase.

SUMMARY

Steatorrhea is the most prominent clinical finding in the small bowel malabsorption syndrome. The cause, diagnosis and treatment of steatorrhea and the various diseases causing steatorrhea are discussed. It is emphasized that steatorrhea occurs more frequently than clinically detected.

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Management Of Respiratory Allergies

CHARLES A. HANNIGAN, M.D.*

In the recent years many valuable new drugs have been made available for the symptomatic treatment of allergic diseases. These include the xanthines, antihistamines, and the steroids. The purpose of this paper is not so much to discuss these drugs as to re-emphasize certain long-standing and valuable principles of management that are being neglected in the welter of information describing the pre-eminent place of these newer drugs. Discovery and elimination of the cause of allergic disease is still the foundation of intelligent treatment. Hyposensitization to the offending allergens must be carried out if their elimination can not be accomplished.

Allergy can be defined as an altered reaction. An allergic disease is a disease produced by an altered reaction to a normally innocuous substance. Such substances in respiratory allergies commonly are inhalants which produce reactions in the mucous membranes of the respiratory tract, causing edema with increased secretions. Symptoms will vary according to the location of the involved mucosa.

Allergic rhinitis may be divided into seasonal rhinitis, commonly known as hayfever, and perennial or year-round rhinitis.

The causative inhalant allergens in seasonal rhinitis vary with the pollen season of the different plants, grasses and trees. If the symptoms start with the budding of the trees, April and May, the offending allergen is tree pollen. Symptoms starting in May and going through June into July are due to grass pollen. The most common allergen in seasonal rhinitis, accounting for 80% to 90% of hayfever, is ragweed pollen. This flourishes from the middle of August until killing frost.

Patients with ragweed pollenosis have frequently made their own diagnosis or have been told the cause by friends before they ever see a physician. However, the tree and grass pollen seasons are not so generally known. The symptoms are nasal stuffiness, and rhinorrhea as well as watering of the eyes, dryness and burning in the throat. One patient aptly described her symptoms by saying that her head felt like a pot of glue.

TREATMENT

Treatment consists of avoiding exposure to the allergen, avoiding circumstances which increase sensitivity to the allergen, hyposensitization, antihistamines, and sometimes steroids.

It is quite difficult to avoid exposure to the allergens.

The seashore with a prevailing off-shore breeze is notably low in pollen. Certain inland areas are also noted for their low concentration of pollen. Although attempts at eradicating ragweed have been made, such programs are not economically feasible with grasses and trees. The pollen concentration may be influenced by atmospheric conditions. On a damp rainy day the pollen will not become airborne, and the patient may experience a good deal of relief; whereas on a sunny day there may be aggravation of symptoms. While out riding in the country, car windows should be kept closed to reduce pollen exposure. In the bedroom air conditioners with efficient filters may be helpful or the windows may be kept closed. The patient is likely to be more comfortable in-doors during the pollen season; in fact, he may be most comfortable at work if it is in-doors.

Avoidance of aggravating factors is helpful. Since strong sunlight is by itself irritating to the mucous membranes of both the eyes and the nose, dark glasses may be helpful. Smoke is irritating, as are strong chemical fumes, perfumes, cut flowers and dust. Alcohol may also aggravate symptoms.

Antihistamines are of great value and in conjunction with the above measures may give complete relief. The ones used will vary according to the physician's own particular preferences. It is always well to remember that a patient may not respond well to one antihistamine but may to another.

Hyposensitization consists of giving gradually increasing amounts of allergen subcutaneously with the expectation that the body's immune mechanism may be conditioned to handle it in a less harmful manner. Subsequent exposure to this allergen in the environment will produce less reaction in the shock organ; here the respiratory mucous membranes. To do this properly it is necessary to perform skin tests to find out how great the patient's sensitivity to the allergen is. Too large an amount of allergen injected into a sensitive patient may produce a serious or even fatal reaction. Commercial preparations are available; however, they are for the average patient and not the patient who is mildly or markedly sensitive. The skin test may be done either by the scratch or intradermal method. My personal preference is for the intradermal method. By the use of different dilutions of allergen intradermally, one may determine just how sensitive an individual is and recommend a hyposensitization schedule tailored to his particular needs. If he is extremely sensitive, it will be impossible to carry him on perennial treatment, that is, monthly injections throughout the year and weekly

*Internist, Central Maine General Hospital, Lewiston, Maine.

during the season. Each year his dosage must be built up prior to the particular pollen season; this is called preseasonal treatment.

There is a definite and specific place for steroids in the management of these diseases. They are of course, contraindicated for the usual reasons; that is tuberculosis, peptic ulcer, diabetes, certain virus infections, heart disease and psychosis. However, there are two situations in which I feel their use is justified. The first concerns the patient who has been adequately managed according to the above criteria and still has severe disability. The second group of patients are first seen in the middle of the pollen season, and continue to have severe symptoms despite the above outlined measures and co-seasonal hyposensitization.

Perennial rhinitis is most commonly caused by dust sensitivity. By dust we do not mean dirt, but the fine hairlike particles floating in the air within the home. These are made up of decayed organic material from mattresses, furniture, clothing, rugs, blankets, curtains, insects, and animals. Dust is everywhere. In this sense it does not indicate poor housekeeping, since it cannot be eradicated completely. The patient with this particular affliction usually goes for many months or years with a condition variously described as catarrh, post nasal drip or sinus trouble. It is encountered probably most frequently by ear, nose and throat physicians who are well aware of the particular problem.

It is not limited to adults, as it often affects youngsters. These unfortunate children are quite susceptible to colds. However, careful questioning reveals their colds are often not contagious to other members of the family. They often develop otitis media. If their tonsils and adenoids are infected, surgical removal will often benefit them.

Typically, these patients are most comfortable out-of-doors. Their symptoms usually become worse in the fall when the heat is turned on, the windows are closed and dust is wafted around by currents of hot air. At that time of the year, people spend more of their time indoors. In the early morning the symptoms are most marked and they complain of stuffed up noses and sneezing and coughing. The coughing usually results from pooling of nasal excretions in the pharynx, so called post nasal drip. They will usually tell you that dust stirred up in sweeping bothers them. Often the children are behavior problems. They don't sleep well and are unable to tell their parents that the reason they don't sleep is because their noses stuff up. Of course, dust may not be their prime difficulty as sensitivity to wool fibers, cat hair, dog hair and perhaps rabbit hair in toy animals, or orris root in face powder can cause similar complaints. It is often possible to eliminate symptoms completely by simple removal of the source of the offending inhalant from the home. In this group of patients, skin testing is extremely valuable. Of course no one likes to part with a pet but often times the allergic patient must.

Common molds have recently been recognized as important sources of inhalant allergens, the offending particles being the spores. The most common clinically significant ones are *Alternaria*, *Hormodendron*, *Penicillium* and *Aspergillus*. The patient with these allergens as the source of his difficulties is likely to have symptoms the year round. He is bothered particularly by damp weather since the molds flourish in dampness. Although they grow well by the lake or seashore, these molds will also grow in the house on practically anything and grow luxuriantly in damp cellars. The best advice to an allergic patient so afflicted by the molds in his home is to sell the house. However, this is usually not possible. Certain measures which will cut down on mold growth in the house include dehydrating agents such as lime, dehumidifying machines and fumigation with formaldehyde.

Principles of treatment are much as outlined in the treatment of seasonal rhinitis. They include, avoidance of the offending inhalant allergen which implies that the agent has been recognized by the clinical history and judicious skin testing, avoidance of aggravating factors, hyposensitization, antihistamines and rarely steroids.

You probably have noticed by now that nose drops have not been mentioned. Often times nose drops are used in rhinitis and contribute to the continued presence of symptoms by their irritating effect. It is generally felt that their continued use is harmful.

If skin testing has revealed that the only source of inhalant allergen is dog hair, the symptoms should subside within a few months after the dog has been removed. Symptoms will not subside immediately, because dog hair remains many months after the dog has gone. The same is true of other offending agents. Dust is actually part of the house and cannot be removed; however, exposure can be cut down considerably. The chief attack against dust should be concentrated on the bedroom where the patient spends from eight to twelve hours a day. Any material that will catch and hold dust should be disposed of. Curtains should be plastic or hard cloth. The mattresses, box springs and pillows should be covered completely with air tight plastic envelopes. Solid foam rubber pillows which can be washed frequently to remove the dust need not be so covered. Clothes should be hung in closets. There should be a minimum of knick-knacks about the room. The floor should be covered by linoleum or washable cotton throw rugs or not covered at all. The room should be dusted frequently. The rest of the house need not be so strictly dust proofed since exposure in those areas is not so great. However, cleaning and vacuuming should be done frequently. Preparations such as Endust or Bye Dust applied to dry mops and dust cloths will cut down on flying dust during cleaning.

Unfortunately, at times the chief housekeeper is the one who is dust sensitive and has the allergic rhinitis. She cannot leave the house when the dusting is being

done, since she has to do it. There are some things she can do to cut down on dust exposure, such as wearing a face mask while dusting and applying Endust on dry mops and dust cloths.

The aggravating factors in these patients are the same as we mentioned under seasonal allergic rhinitis.

The most common allergen is house dust. For hyposensitization, gradually increasing amounts of dust are injected subcutaneously until amounts sufficient for relief have been given. Injections are then continued at intervals sufficient to keep the patient free of symptoms. For the occasional patient whose symptoms are due to molds, measures to cut down on mold exposure may result in relief of symptoms. Hyposenitization to molds may be helpful in refractory cases.

Often these patients have an associated allergy to their own bacteria in the infected nasal passages. In these cases autogenous bacterial vaccines have been recommended and are given in gradually increasing amounts until dosage levels are reached which give relief of symptoms. It is difficult to prepare satisfactory autogenous vaccines and many times commercial stock vaccines may serve just as well.

Although it is possible to immunize to cat or dog hair, giving away the offending animal is preferable.

An Antihistamine taken before bed time will frequently result in a better night's sleep for these patients. Occasionally the nasal polyps these patients develop may respond to steroids.

Allergic Rhinitis to most patients is more annoying than disabling. The real danger lies in the development of asthma.

In asthma the organ primarily affected is the bronchial mucosa. The reaction is similar to the reaction in the nasal passages, but because the caliber of the airway is much smaller, edema in this area results in much more serious physiological impairment. Often the patient starts off with a seasonal or perennial rhinitis and later develops asthma, while he still has rhinitis. One of the main reasons for vigorously treating rhinitis is that approximately 20 to 30% of these people will develop bronchial asthma if untreated.

The asthmatic will tell you that he has wheezing or tightness in the chest. The severity of the asthma depends upon the degree of bronchial obstruction. At first, the obstruction is due to edema of the mucosa and spasm of the smooth muscle. The secretions then become trapped and further plug up the bronchioles. Untreated, or insufficiently treated, asthmatic patients will develop emphysema, and anoxemia with secondary polycythemia and pulmonary hypertension. In long standing asthma, cor pulmonale with right sided heart failure may develop.

The management of asthma includes most of the principles mentioned above. The offending inhalant allergens should be identified and exposure to them eliminated or, if that is not possible, minimized. As asthma may develop in the course of seasonal rhinitis, the prin-

ciples of avoidance of allergens and hyposensitization are the same. In those patients whose asthma is related to sensitivity to house dust the dust precautions outlined above should be instituted and dust hyposensitization started. It is often possible to eliminate the asthma by discovering and completely removing the offending inhalants from the environment.

Antihistamines are not too helpful in asthma since they tend to dry up secretions and cause plugging of bronchioles. A primary aim of treatment is to keep bronchial secretions liquid and easily raised. This can best be done with small amounts of saturated solution of K I using five to ten drops three times a day. Since hypothyroidism may result from uninterrupted iodine treatment, it is well to give it two weeks out of three.

Often times asthma follows or is aggravated by an upper respiratory infection. In these patients there is frequently a bacterial bronchitis which should be treated with appropriate antibiotics. Asthma which shows negative skin tests to the common inhalants is usually infective and the infected areas should be promptly treated. If the infection cannot be completely eliminated by medical or surgical means the use of Bacterial Vaccine may be helpful.

Broncho-dilators are of value and will often break up a mild attack of wheezing. Commercial preparations are available which include Theophylline, Aminophylline, and Ephedrine. Inhalation of Isuprel,[®] Neo-synephrine[®] or Adrenalin[®] may offer quicker relief. For patients in whom the above measures are not sufficient, steroids may be in order. However, avoidance of the offending allergens, treatment of infections, hyposensitization to the allergens, Iodides and broncho-dilators should control the usual patient's asthma.

It is not within the scope of this paper to discuss the treatment of status asthmaticus.

CASE REPORTS

The following case reports are selected to illustrate the principles mentioned above.

Case One:

A 38 year old man had had hayfever for twenty years starting the fifteenth of August and lasting until frost. His symptoms were described as sneezing, nasal stuffiness and a burning in the roof of the mouth. There was no family history of allergy. He had noted that dust from housecleaning would make him sneeze. He had previously been given antihistamines and felt that his symptoms had become progressively more severe during the preceding two to three seasons. Except for dry crusted nasal mucous membranes, physical examination was unremarkable. He was initially seen prior to August fifteenth. Intradermal skin tests revealed him to be sensitive to dust and extremely sensitive to ragweed. He was accordingly counseled on avoidance of dust, ragweed and precipitating factors and given gradually increasing small amounts of ragweed subcutaneously to

a maximum of 50 protein nitrogen units, which was carried on weekly through the season. He was also given Theruhistin S-R,[®] 12 milligrams twice daily as needed. There was marked subjective relief of symptoms during the ragweed season.

This is a straight forward ragweed pollenosis. This patient knew what he had and his reading in the lay press had encouraged him to seek hyposensitization. As frequently happens he had a marked sensitivity to dust. However, his lack of symptoms outside the ragweed season indicated this was not clinically of significance. However, this patient was instructed on dust avoidance since a dormant dust allergy could have been lighted up by heavy ragweed exposure.

Case Two:

A 43 year old woman had sneezing and nasal stuffiness for three years with inability to breathe through her nose at all. These symptoms followed her moving from out of state and had become so severe there seemed to be no let up. There were no seasonal exacerbations. There were no pets. For three months prior to its arrival here the furniture had been stored in a warehouse.

Family history was significant in that her daughter had hayfever and asthma. Physical examination was unremarkable except for swollen pale nasal mucous membranes. Intradermal skin tests were markedly positive to dust. The patient was advised on dust precautions, was given Ambodryl,[®] 25 milligrams at bed time and started on dust hyposensitization. Within five weeks she was able on occasion to breathe through her nose and has shown a satisfactory response.

This appears to be mainly a dust sensitivity. The dust collected by the stored furniture was apparently the triggering mechanism.

Case Three:

An 11 year old girl had had a stuffy nose and frequent colds as a baby. For three years she had had occasional asthmatic attacks treated by Nephenalin[®] tablets. During the previous winter she had had frequent colds and accompanying episodes of asthma. There was no family history of asthma. Her asthma had always been better

in the summer. There was both a dog and cat at home.

Physical examination revealed moist boggy nasal mucous membranes. The tonsils appeared normal. There were expiratory and inspiratory musical wheezes over both lung fields. Intradermal skin tests revealed marked sensitivity to grasses, dust, dog, cat, and wool.

Her parents were instructed in the avoidance of dust. The cat and dog were given away. Wool blankets were removed from her bed. It was not felt that grasses were a factor since there was no worsening of symptoms in June and July. Dust injections were given subcutaneously. Saturated solution of Potassium Iodide, five drops three times daily, two out of three weeks was begun. The Nephenalin[®] was continued. On this regimen the wheezing rapidly cleared and the patient has remained asymptomatic.

The patient's stuffy nose during infancy demonstrated an early allergic rhinitis probably due to pets, wool blankets or dust. She had frequent colds and these often triggered asthmatic attacks. However, often times the "colds" reflected an aggravation of her allergic rhinitis since not all of these colds were contagious. Exposure to offending allergens was eliminated. Dust hyposensitization was given because it was felt dust could not be eliminated. Her response to these measures indicated that infection did not play a primary role in her asthma.

SUMMARY

In summary the purpose of this paper has been to re-emphasize basic principles of specific treatment in the management of respiratory allergies. These include:

1. The recognition of causative allergens by history and judicious skin testing.
2. Methods of elimination and avoidance of causative allergens.
3. Indications for hyposensitization to causative allergens.

Non-specific or symptomatic measures which include the use of nose drops, antihistamines, antibiotics, expectorants, bronchodilators and steroids, as well as the avoidance of primary irritants have also been discussed.

85 Goff Street, Auburn, Maine.

Recurrent Gallstone Ileus

Report Of A Case

IRVING A. RATNER, M.D.*

Impacted gallstone as a cause of intestinal obstruction is relatively uncommon. Various authors^{1,2,4} report the incidence from 0.4% to 3.5% of all cases of intestinal obstruction. Recurrent gallstone ileus requiring repeated ileotomy is even more rare.

Sex incidence is approximately fifteen to one in favor of female.

The symptoms of gallstone ileus are similar to mechanical obstruction of the intestine due to any cause: crampy abdominal pain, nausea, vomiting and abdominal distension being the most common.

Diagnosis is often quite difficult prior to operation, but it can be made sometimes by x-ray visualization of the obstructing gallstone.

TREATMENT

As in any case of intestinal obstruction, early relief of the obstruction is important. Most authors^{1,3,5,6} believe that simple enterotomy, removal of the stone and then primary closure of the enterotomy is all that is necessary. Then, subsequent elective cholecystectomy and closure of the cholecyst-enteral fistula at a later time should be done.

CASE REPORT

A forty-seven year old white male who entered the Central Maine General Hospital with a three-day history of mid-abdominal crampy pain with nausea, vomiting and abdominal distension.

Two years previously the diagnosis of metastatic seminoma was made on the basis of a left supraclavicular lymph node biopsy. The primary lesion was presumed to be in a left undescended testicle. Since that time the patient has received several courses of x-ray therapy to his neck and groin.

Physical examination on this admission revealed a relatively well-developed, well-nourished white male in acute distress complaining of abdominal cramps. Examination of the head, neck, chest, heart and lungs was within normal limits. The abdomen was distended with visible peristaltic waves noted. There was mild generalized tenderness but no spasm. There was a deep 3" x 3" soft mass in the region of the left inguinal canal. Only the right testicle was palpable in the scrotum. Peristaltic sounds were hyperactive with frequent

rushes noted. The remainder of the physical examination was unremarkable.

Chest x-ray was unremarkable. Scout x-ray of the abdomen showed two rounded calcified densities in the right lumbar area. Routine blood and urine studies were unremarkable.

A Miller-Abbott intestinal tube was passed but would proceed no further distally than the mid-ileum.

On the fifth hospital day abdominal exploration was carried out. Three feet proximal to the ileocecal valve a gallstone approximately 2" x 1" x 1" was found obstructing the ileum. An ileotomy was done and the stone removed. A firm inflammatory mass was palpated in the right upper quadrant of the abdomen. Incidentally, the left undescended testicle was removed at this time. There was no evidence of seminoma anywhere in the abdomen.

The patient had an uneventful course until the seventh postoperative day when symptoms of intestinal obstruction recurred. Repeat scout films of the abdomen showed only one calcified density in the right mid-abdomen. A Miller-Abbott intestinal tube was reinserted and again proceeded down to the mid-ileum. At this time a small amount of diodrast was injected through the Miller-Abbott tube and demonstrated another gallstone obstructing the ileum.

A second coeliotomy was done and a second large gallstone was removed from the ileum approximately one foot proximal to the first one. Again the right upper quadrant inflammatory mass was palpated. It was felt that the patient had a cholecyst-enteral fistula which would subside after a time and that at a later date cholecystectomy and closure of the fistula would be carried out.

Following his second operation the patient developed a wound abscess which subsequently was drained and then healed. About one week after his second operation the patient again exhibited symptoms and signs of small intestinal obstruction. This time, however, the obstruction was relieved by the Miller-Abbott tube.

The patient was finally discharged on his fiftieth hospital day.

He returned to the hospital five months later in excellent general physical condition at which time an elective cholecystectomy was carried out. The gallbladder was quite small and scarred. A small cholecystoduodenal fistula was present which was closed. The patient was discharged home after a relatively uneventful course.

*Surgical Service, Central Maine General Hospital, Lewiston, Maine.

DISCUSSION

This patient represents a problem of repetitive small intestinal obstruction as a result of large gallstones escaping the gallbladder through a cholecyst-enteral fistula. It is of note that prior to his first coeliotomy it was felt that the etiologic agent for the obstruction would be metastatic seminoma. However, this proved not to be the case and also that there was no evidence of residual tumor in the excised left undescended testicle or elsewhere in the abdomen. The reason that the second gallstone was not removed from the gallbladder during the first operation was that the stone felt firmly impacted in the gallbladder fundus. It was believed that with all the inflammation in the gallbladder region at that time it would not be the proper time for cholecystectomy or closure of the cholecyst-enteral fistula.

SUMMARY

An unusual and interesting case of recurrent gallstone ileums is presented with the method by which it was successfully treated.

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- CURRENT CONCEPTS IN VASCULAR SURGERY
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Vascular Calcification In Infancy

HARRY NEWMAN, M.D.*

There have been occasional reports of extensive vascular calcification in infants, but the condition is still sufficiently rare to be of interest.

CASE REPORT

A seven weeks old white male infant was admitted for hospitalization because of a possible blood dyscrasia. Following a normal full term delivery, the infant did quite well until five days prior to admission when abdominal distention was first noted by the parents. He was taken to his family physician who performed an abdominal paracentesis, and 100 cc. of fluid were removed. In addition, a peripheral blood smear was reported to show unusual type of white cells, and he was subsequently admitted to the hospital for diagnosis and treatment.

Family history was unremarkable. The child's dietary and supplementary vitamin intake was not unusual.

On examination, the infant was afebrile and appeared well-developed and nourished. There were no findings of upper respiratory distress or infection. Cardiac examination was normal. A markedly distended abdomen was found with signs of moderate dehydration. The liver could be palpated 3 cm. below the costal margin in a very taut and tympanitic abdomen. A bulge was present in the right upper quadrant of the abdomen, and the right flank seemed to correspond to the contour of the liver. The spleen could not be felt, and the physical examination was otherwise not unusual.

Laboratory examination on entry revealed the following: hemoglobin of 64%, red blood cell count 2,900,000, white cell count 14,400 with a normal differential; total protein 4.9 m.g.%, albumin 3.4 m.g.%, globulin 1.5 m.g.%; prothrombin time 81% of normal; blood urea nitrogen on one occasion was 34 m.g.% but on repeat examination was found to be 16 m.g.%. During the patient's course in the hospital a total of ten urinalyses had been performed, all of them revealing consistent 1+ albuminuria. Some of them had no reducing agents; others ran from 1+ to 4+. On the days when he ran reducing substances in the urine, glucose was given to him parenterally. Casts were present in the urine, mostly hyaline but occasionally granular. There were a few pus cells, but no red cells were identified. Bacteria were present in all but one of the urine samples. Kline and Kahn tests were negative. There was nothing either in the peripheral blood studies or tibial marrow study

to indicate a blood dyscrasia. Glucose tolerance test was as follows: fasting 65 mgm.%, 35 minutes 127%, 70 minutes 177%, 2 hours 15 minutes 119%, 4 hours 15 minutes 124%. Serum calcium and serum phosphorus studies were not obtained.

Radiographic examination of the chest revealed no abnormalities. An intravenous pyelogram showed a normal left kidney, but the right kidney was not visualized. There was bilateral calcification in the femoral and popliteal arteries (Fig. 1).

An exploratory laparotomy was subsequently performed. No fluid could be found in the abdominal cavity; the kidneys were palpably normal, but the liver appeared tremendously enlarged, the right lobe extending down to the iliac crest. On palpation the liver was also somewhat increased in consistency. A biopsy was taken from the liver edge, and the pathological report from the specimen indicated very large cells with well-defined outlines. The increase in size of the cells was due to the large amount of cytoplasm which was light in color, granular and reticular in structure, all of which were suggestive of an abundant amount of glycogen within the liver cells. Some cells were distended by large vacuoles. The cords of the liver cells were well-defined; in some places they were grouped around sinusoids in such a fashion that an adenomatous pattern was formed. The hepatic triads showed a mild increase in fibrous connective tissue, but no inflammatory cells were found. The alcohol fixed tissues were embedded in celloidin, and Best's carmine stain was made showing an abundant amount of glycogen within the liver cells compatible with that noted in glycogen-storage disease of the liver.

During the infant's stay in the hospital, he remained afebrile except for two elevations of temperature to 101.5 F. that were not explained on an infectious basis. He ate poorly and seldom took over 2.5 ounces of feeding. The child lost 270 grams during his three weeks' hospital stay despite frequent parenteral therapy in addition to his usual feeding.

Inasmuch as the diagnosis seemed established as certainly as possible and little further benefit could be expected from hospitalization, the patient was discharged on his 22nd hospital day. His condition and nutritional state were somewhat worse than when he entered. The patient subsequently expired at home at eleven weeks of age. No autopsy was performed.

COMMENT

The co-existence of renal disease and disturbed calcium metabolism is implied by the name renal rickets.

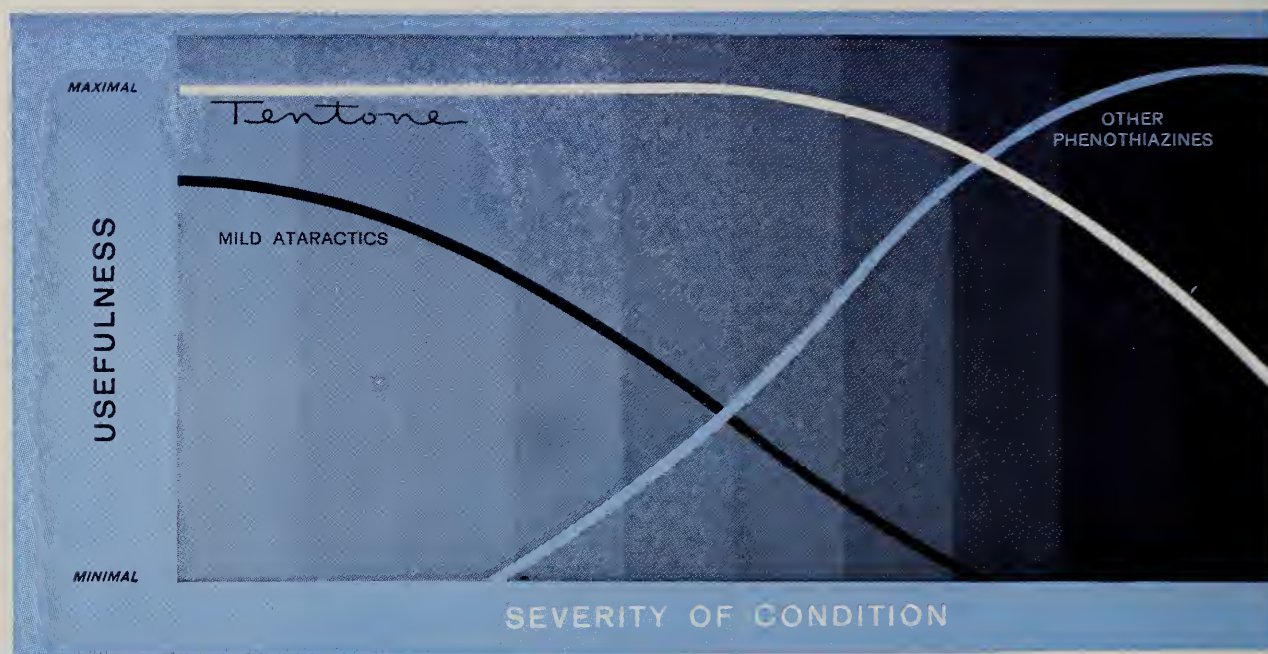
Continued on page 176

*Radiologist, Oregon City Hospital, Oregon City, Oregon; Ocean Beach Hospital, Ilwaco, Washington; Willapa Harbor Hospital, South Bend, Washington.

ANNOUNCING



A HIGHLY EFFECTIVE
TRANQUILIZER FOR
EXTENDED OFFICE
PRACTICE USE



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ACTION ADAPTED
FOR LOWER RANGE
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DISORDERS**

The development of TENTONE® Methoxypromazine Maleate *Lederle* does not duplicate primary function of existing tranquilizers. TENTONE fills the need for a practical, potent agent for extended use in everyday practice (as illustrated above).

Action of TENTONE Methoxypromazine Maleate approaches that of the strong phenothiazines without their drawbacks. Calming response is positive and rapidly apparent to both patient and physician. However, as a basic phenothiazine modification, TENTONE allows full therapeutic application in the mild and moderate range of anxiety-tension and somapsychic disorders most usually seen in general practice.

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TOLERATION —
MARKED
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COMPLICATIONS**

Incidence of untoward reactions is exceptionally low and approximates the mild ataractic drugs. Reduction in sensitivity reaction, intestinal distress, blood, brain or liver toxicity is striking, particularly in the low dosage range. TENTONE exhibits greater freedom from depression and drug habituation. Physical and psychic orientation is usually preserved. Occasional drowsiness may be encountered, particularly in higher dosages. In moderate to more severe cases, this sedative effect may be desired.

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MILD SEDATIVE
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POSSIBLE
POTENTIATION OF
ANALGESICS
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Since tranquilizing drugs may potentiate the action of pain-relievers, sedatives, and barbiturates, they should be used with caution in conjunction with them, or to achieve a greater response to these drugs in various conditions when desired. They may also be useful in reduction of effective dosage to better tolerated, or non-habituating levels.

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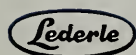
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In moderate to severe cases: from 75 to 500 mg. daily.

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Supplied: 10 mg., 25 mg. and 50 mg. tablets



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VASCULAR CALCIFICATION IN INFANCY — *Continued from page 172*

FIG. 1. AP view of the lower extremities; bilateral calcification of the femoral and popliteal arteries.

Mitchell,¹ in an extensive review of his syndrome, mentioned frequent occurrence of sclerosis, thickening, and atheromatous patches in the aorta and other blood vessels observed at autopsy. Baggenston² reported nine cases of vascular calcification occurring in infancy, four of which had renal disease. Smyth and Goldman³ presented a case in a fourteen year old boy with metastatic calcification of the tentorium and falx cerebri with vascular calcification observed at autopsy associated with severe renal disease. A case of marked degree of calcification in major vessels of the extremities, iliac vessels, abdominal aorta and vessels of the buttocks and perineum was also presented by Hild.⁴ In addition the chest x-ray showed diffuse mottling due to calcific deposits. Clinical findings indicated that severe renal disease was the predisposing factor and was severe enough to cause metastatic calcification. Andersen⁵ presented two cases of renal hyperparathyroidism in infancy in which one case was treated with intensive anti-rachitic therapy which was subsequently followed by calcification of the small arteries throughout the body and death at the age of six. Postmortem examination indicated death as a result of cardiac infarction. The second case

was treated more conservatively and showed metastatic calcification to a less severe degree.

There are cases reported in which no definite etiology to generalized arteriosclerosis in infancy can be discovered. Lipman⁶ presented a case of a five month old infant who died of myocardial infarction associated with generalized arteriosclerosis. Infarction resulted from multiple coronary occlusions. The etiology was unknown. There was no history of vitamin D intoxication, hyperparathyroidism, or other disturbances of calcium metabolism.

Several etiologies are imputed to cause vascular calcification in infancy. They include: 1) severe renal disease; 2) excess vitamin D; 3) congenital defects in the intracellular matrix of arteries; 4) infectious diseases; 5) functioning parathyroid adenomata with resultant hyperparathyroidism; 6) disturbed calcium-phosphorus metabolism. Usually the inner and medial thirds of the media are the sites of predilection of calcium deposition. Associated with it is fibroblastic proliferation of the intima with subsequent narrowing of the lumen.⁷ Generally speaking the medium-sized and small arteries are affected, but the topographic distribution varies from case to case. The pulmonary and cerebral arteries appear to be less affected.

CONCLUSION

A case of vascular calcification in a seven weeks old male infant has been presented in which the etiology is obscure but may be related to renal dysfunction. A histologic diagnosis of glycogen-storage disease was made. Possible causes of vascular calcification in infancy have been listed.

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316 East 14th Street, Vancouver, Washington.

SPECIAL ARTICLE

Medicine And Nursing

EDITOR'S NOTE: Paul S. Hill, M.D., Saco, Chairman of the Liaison Committee of the Maine Medical Association and the Maine Nurses' Association, introduced a recent meeting with the following remarks.

Once upon a time, it now seems like many years ago, there were two great professions with a common and complementary interest — the prevention of disease, the preservation of life and the relief of suffering. Each profession stood for the same thing; there were no hands on the clock, no days and no nights, no task too menial, no rule too strict.

They sought progress and advancement of medical science through research and a combination of their skills and devotion. As the base broadened, others came into the field and the two professions found themselves being pulled relentlessly apart by the forces around them. Some of these forces were good and provided rapid and sometimes headlong advancement in the field of medicine. Some were bad and put too much reliance on technical method and too little on acuity of the senses and good judgment. Some of these forces broadened and strengthened knowledge, but in the process made it less available and usable.

Since the War, these two professions, the profession of nursing and the profession of medicine, have tended to go their own ways. They have all but ceased to complement one another in a task which basically remains the same. Disease is just as rampant though wearing a different cloak, the preservation of life is just as important and suffering just as painful as before. Diagnosis and treatment are not usually a single act, but a continuity of action based upon the cooperation of these two professions.

It is not beyond the realm of possibility that we are

now in a phase where we should consolidate our gains and reappraise both our virtues and our faults. If we have improved technically in the field of medicine and nursing, we may find that relatively we have made no such advances from a humanitarian point of view.

It therefore seems that this Joint Group meeting as a continuing and permanent group representing, as it does, these two important associations, has a definite and solid purpose. For example, it can study the problems besetting patient care and find ways for better care. It can do a better job of solving the nursing shortage problem than any other group in the state, for it is closest to it and understands the situation. It can bring back once again a spirit of close cooperation and harmony between the two professions which is so necessary to fine medical care. By so doing it will strengthen again the position of the doctor and the nurse in society. If the Maine Nurses' Association and the Maine Medical Association were at some point in the future to unite in a project considered necessary to proper medical care, there could be little opposition to it.

Thus it can be a *strong* committee which can have before it even now some difficult and plaguing problems. The future will undoubtedly hold more. But if it is to be worth anything, it must ultimately make decisions and recommendations for action to its parent organizations. If there is disagreement, as normally there may be, then with a little give and take, a common ground should be found. And thus we may live happily ever after!

The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

Medical Care Expenses Continue Upward Trend

Price index for medical care rose to 148.8 in March, according to the Department of Labor's monthly report. The composite index stayed the same, at 123.7 (1947-49 = 100). The medical care rise maintained this category's unique distinction of having increased every month for at least the past five years.

Fund Shortage Imperils Navy's Medicare Program

The Navy has exhausted its Medicare budget for compensation of private physicians and hospitals caring for military dependents. If supplemental funds are not granted by Congress, "we will have to drastically reduce the medical care now afforded Navy dependents," a House subcommittee on appropriations has been informed by Assistant Secretary of Defense, Richard Jackson.

Medicare Clarifies "Emergency" and "Acute Surgical Condition"

Medicare headquarters here has just published an explanatory bulletin on the subject of physicians' statements in support of claims to compensate for care given in emergencies and certain surgical episodes. The more salient features of this document are these:

"It has always been the policy of this office to rely

upon the judgment and integrity of the cognizant medical authority (charge physician) in substantiating claims. . . . When the cognizant medical authority indicates on the claim form, or attachment thereto, that an acute or emergent medical or surgical condition existed which required prompt treatment in a hospital without delay, and if the care is furnished in compliance with the conditions outlined in ODMC Letter No. 16-58, the claim — if otherwise complete — is payable without further reference to this office. It is emphasized that the acute or emergent condition mentioned above must be of a medical or surgical nature, not socio-economic."

"The basic statement of the physician supporting a claim should be concise and should not be so qualified as to raise doubt as to the meaning of the basic statement itself."

Where the case was that of an emergency requiring hospitalization, the following statement should be included in physician's claim form: "The case was a bona fide acute emergency." If it was a surgical emergency, the doctor's certification should read substantially — but not necessarily exactly — as follows: "An acute condition existed requiring hospitalization, without delay, for the purpose of carrying out surgery at the earliest practicable time."

"It is expected that a physician's diagnosis on the claim form or any separate statement or certification

substantiating either an emergency, acute surgical condition or acute medical condition will be consistent with the clinical facts in the case."

"In those unusual instances where the fiscal administrator has reason to believe that an inconsistency exists, the case, together with copies of pertinent hospital medical records, should be referred to this office for consideration."

"Physicians (in 1958) were urgently requested to assist hospitals by furnishing to them information and statements necessary to properly substantiate hospital claims. The necessity for physicians' assistance must again be emphasized. Adjudication by the different fiscal administrators can best be achieved when information supporting the separate claims (hospital and physician) is consistent."

New Members Of Advisory Councils At National Institutes Of Health

The following are new members of advisory councils to National Institutes of Health: *Allergy and Infectious Diseases* — Dr. William Frye, New Orleans; Dr. W. B. Sherman, New York; Hamilton S. Putnam, Concord, N. H. *Arthritis and Metabolic* — Dr. Charles H. Burnett, Chapel Hill, N. C.; Dr. C. V. Moore, St. Louis; **Mrs. Alvin A. Morrison, Portland, Me.**; Dr. Charles Ragan, New York. *Cancer* — Dr. C. A. Evans, Seattle, Dr. H. E. Skipper, Birmingham, Ala.; Dr. Sidney Weinhouse, Philadelphia.

Veterans' Outpatient Care

In the fiscal year beginning July 1, 1959, the VA is budgeting \$800,000 more for fee basis services, medical, than it is spending this year. Yet its allocation for dental fees is \$39,000 less. The proposed figures for 1959-60 are, respectively, \$9,554,000 and \$1,009,000. Note: It seems certain that in most of the states, and probably all of them, the office visit fee will be increased from \$4 to \$5 beginning July 1. While other increases are anticipated, this is the most important one dollar-wise.

Centralized Fee Schedule

Rep. Sidney R. Yates (D., Ill.), in quizzing VA's Dr. William H. Middleton, raised the question of a consolidated fee schedule — the feasibility of delegating to one agency the task of working out fees to pay civilian practitioners for services to veterans, military dependents, certain Federal employees and other beneficiaries. Dr. Middleton agreed the plan has merit.

National Recognition For Another Maine M.D.

Another Maine M.D. steps up to take his place in the national scene. Francis A. Winchenbach, M.D., Past President of the Maine Medical Association and currently Chairman of the Health Insurance Committee, has been appointed a director of the national Blue Shield Medical Care Plans, Inc. Doctor Winchenbach has been with the Health Insurance Committee of the Maine Medical Association for several years and has been closely associated with Blue Cross and Blue Shield since its early days. He is eminently qualified for the position.

Doctor-Shortage Study

Rep. Francis E. Dorn (R., N.Y.) wants Congress to set up a Commission on the Doctor Shortage in the United States and has introduced an enabling bill (HR 6417). It calls for a 12-member body appointed (four each) by the President, the Vice President and Speaker of the House.

Emotional Problems Cause Many College Drop-Outs

The "spoon feeding" of children has been blamed for the high rate of drop-outs from college.

Four out of ten students in college today will not stay long enough to be graduated, according to an article in the April issue of TODAY'S HEALTH, published by the American Medical Association.

The root of the high drop-out rate lies in psychological troubles, most educators think. The students simply are not mature enough to cope with college and its demands.

They are the product of an "era of spoon feeding," the article said. When they get to college and find that everything is not done for them, they crack up and drop out.

There are, of course, other reasons for leaving college, including financial difficulties, marriage or inability to meet the necessary intellectual standards. However, the emotional problems are great.

The article offered some suggestions to parents and students for handling these college emotional problems.

Parents can help their children remain in college by leaving the children alone; by seeing that they have information about college and career selections, but letting them make their own choice; by refraining from imposing their parental interests on the children; by seeing that children have a previous living-away-from home experience; by not overstressing the need for high grades and by letting the children earn part of their own expenses.

From The Secretary's Notebook

SUMMARY — INTERIM MEETING OF M.M.A. HOUSE OF DELEGATES

April 5, 1959 at Brunswick, Maine

1. Called to Order at 2:20 P.M. by the Chairman, Allan Woodcock, M.D., of Bangor, President-Elect. Committee on Parliamentary Procedure — Linus J. Stitham, M.D.

2. Roll Call — There was a total attendance of 50; 25 delegates; 5 alternates; 6 county secretaries, 10 councilors, the Secretary-Treasurer, and three guests. The breakdown follows — (the number in parenthesis following the county society represents the number of delegates the society is entitled to in addition to the county secretary).

1st District: Cumberland County (8) — County Secretary, Albert Aranson — Delegates, D. S. Wyman, S. B. Sylvester, R. L. Bidwell, C. R. Glassmire — (Alternates, D. P. Cole, R. H. Pawle, D. K. Lovely). York County (3) — County Secretary, C. W. Kinghorn — Delegates, J. R. Downing, R. J. P. Robert, S. D. Drummond.

2nd District: Androscoggin County (3) — Delegate, R. W. Green. Franklin County (1) — Delegate, P. A. Fichtner. Oxford County (2) — Delegates, H. L. Harper, W. G. Dixon.

3rd District: Knox County (2) — Delegates, H. Hochschild, H. Tounge. Lincoln-Sagadahoc County (2) — County Secretary, R. I. Clark — Delegates, J. F. Dougherty, J. F. Andrews.

4th District: Kennebec County (5) — County Secretary, A. H. Morrell — Delegates, B. T. Darlington, A. H. McQuillan, G. J. Robertson — (Alternates, R. N. Fallon, R. L. Chasse). Somerset County (1) — County Secretary, H. G. Turner. Waldo County (1) — County Secretary, G. L. Temple.

5th District: Hancock County (2) — Delegate, J. H. Crowe. Washington County (1) — Represented by council member, R. G. MacBride.

6th District: Aroostook County (3) — Delegates, H. M. Helfrich, Jr., R. M. Graves. Penobscot County (5) — Delegates, A. N. Lieberman, N. P. Blackburn, J. A. Woodcock. Piscataquis County (1) — Delegate, L. J. Stitham.

Councilors: E. E. O'Donnell, Allan Woodcock, C. E. Richards, J. A. MacDougall, W. H. McWethy, R. G. MacBride, R. C. Stuart, F. A. Winchenbach, P. P. Thompson, Jr., D. F. Hanley. *Secretary-Treasurer:* Esther M. Kennard.

Guests: Nancy Helfrich, M.D., Presque Isle; Thomas A. Martin, M.D., Portland, Chairman, Medical Advisory Committee; Mr. Robert O'Connor, Augusta, Legal Counsel.

Even though the attendance was not 100 per cent (alternates as well as delegates are invited making a possible attendance of 106), each county society was represented and thus has a member to answer questions concerning the proceedings at this interim session.

3. Announcement of the following members appointed

by the President-elect to serve on the Nominating Committee in accordance with the By-Laws — Chap. IV, Sec. 5 :

1st District	Charles R. Glassmire, M.D., Portland
2nd District	Walter G. Dixon, M.D., Norway
3rd District	John F. Dougherty, M.D., Bath, Chairman
4th District	Oakley A. Melendy, M.D., Augusta
5th District	James C. Bates, M.D., Eastport
6th District	Robert A. Graves, M.D., Fort Fairfield

The report of the Nominating Committee shall be the first Order of Business of the House of Delegates at the second meeting of the House on June 21 at 4:00 P.M. at The Samoset Hotel, Rockland.

4. Presentation of Statement of Income and Expenditures for 1958-1959 and suggested budget for 1959-1960 as drawn up by the Council.

The proposed budget will be presented for discussion at the first meeting of the House of Delegates in June (Sunday, June 21 at 10:00 a.m.) and will be referred to a reference committee — final action to take place at the second meeting of the House.

5. Questions posed by A.M.A. House of Delegates at December, 1958 meeting in Minneapolis.

1. Free Choice of Physician —

A motion was made by Philip P. Thompson, Jr., M.D., Delegate to A.M.A., that the principle of free choice of physician should be applied as universally as practicable. Each plan member should have the widest possible choice of physician. This motion was duly seconded and was passed.

2. Closed Panel System —

A motion was made by Doctor Thompson that each component society (state) should determine its own policy and not support a national policy (A.M.A.) on this particular question. The motion was duly seconded and was passed.

6. Resolution re: Liability insurance approved by House of Delegates in June, 1958.

Doctor Hanley explained that we had written to each hospital in the state. There have been about 26 replies, some of which indicate that there is a misunderstanding concerning the type of insurance involved. Consequently, the Council, at a meeting on April 5, voted that a letter be sent from the Maine Medical Association to designated members throughout the state; this letter to contain specific questions which those members will present to the hospitals in their respective areas. These members will be called upon for a report at the annual meeting in June. (This letter has been sent to each county secretary).

7. Coffin Bill for Rural Medical Facilities.

Continued on page 192



DEAN H. FISHER, M.D.
COMMISSIONER

State of Maine

Department of Health and Welfare

Radioactivity Control Program In The Department Of Health And Welfare

JAMES W. FULLER, B.S.* and E. W. CAMPBELL, Dr.P.H.**

Recently in response to public demand, considerable information concerning radioactivity in air, milk, water, and other foods has been released by the United States Public Health Service.

During the past three years the State Department of Health and Welfare, Division of Sanitary Engineering, has been conducting regular analyses of air and rain-water to determine the amount of radioactivity that has occurred in Maine, so that the results can be compared with the fallout in other states, and to make possible a future evaluation of the health problem in this area. Three air collecting stations have been established. The first station was located on the roof of the State House and samples from this station are tested regularly in the Sanitary Engineering laboratory. The second station was set up at the District Health Office in Portland. The third station was established by the United States Park Service at Arcadia National Park. The samples from the Portland and Arcadia stations are sent to Cincinnati, Ohio, for analysis, as part of the Community Air Pollution Program, National Air Sampling Network.

The Public Health Service is currently carrying on an investigation of the radioactivity in milk samples from 8 to 10 locations throughout the United States. This area is believed to be covered by the inspection of the New York milk shed. The choice of milk for the survey was made for several reasons. First, Strontium-90 which is one of the radioactive isotopes of most concern is found in milk. Second, Strontium-90 has a long life. Third, Strontium-90 may be deposited in the bones. Fourth, milk and milk products present a large part of the national diet. Fifth, milk is produced in all parts of the country, and is therefore readily available for scientific research.

The National Committee on Radiation Protection and Measurement, on the basis of scientific opinion available, has set maximum permissible limits for lifetime ex-

posure of the individual to specific radiation and radioactive materials. These limits were adapted from safety standards for persons working in close proximity to sources of radiation, such as medical x-ray technicians. The occupational permissible limits were divided by 10 to provide permissible limits for the general population.

For Strontium-90, for instance, the Committee's current recommendation for a maximum permissible concentration is 80 micromicrocuries* per liter of water or milk. This means that on the basis of present knowledge the average concentration of Strontium-90 among all items of the diet — water, meats, vegetables, bread, etc., — could be 80 micromicrocuries per liter (or per kilogram — 2.2 pounds) for a lifetime, without exceeding the current maximum permissible concentration.

From the results of tests made by the Division of Sanitary Engineering on the samples of air and rain-water collected regularly at the State House valuable statistical information concerning natural and man-made background activity is being compiled.

Table I shows a comparison between typical results of recent determinations of the radioactivity in air samples collected by the Division of Sanitary Engineering at our station in Augusta, the Community Air Pollution Program National Air Sampling Network Station at Portland, and the Nationwide Radiation Surveillance Network Station at Lawrence, Massachusetts.

The amount of radioactivity in the air in Maine is low in comparison to the present accepted National Bureau of Standards figure of 1000 micromicrocuries of an unidentified beta emitter per cubic meter of air.

A brief discussion of ionizing radiation to provide a basic record of the problem seems desirable at this point.

The types of ionizing radiations that are of most importance to health workers are alpha particles, beta particles, gamma radiations, and x-rays.

*(A curie is the amount of radioactivity in one gram of radium. A micromicrocurie is one millionth of a millionth of a curie.)

*Industrial Hygiene Engineer.

**Director, Division of Sanitary Engineering.

TABLE I

DATE Mo. Day Year	AUGUSTA Beta Radioactivity Micro-Microcuries per cubic meter	PORTLAND Beta Radioactivity Micro-Microcuries per cubic meter	LAWRENCE, MASS. Beta Radioactivity Micro-Microcuries per cubic meter
5 1 1958	12.31		5.88
5 3 1958		3.6	14.55
5 14 1958		2.	1.98
5 15 1958	4.45		1.53
5 22 1958	5.14		4.46
5 30 1958		2.5	0.30
6 5 1958	2.24		1.13
6 12 1958	4.38		2.19
6 17 1958		1.3	2.87
6 19 1958	6.44		3.14
6 26 1958	5.23		2.10
7 1 1958		6.4	4.32
7 5 1958		3.9	4.55
7 18 1958	3.14		1.27
7 20 1958		1.2	1.27
7 24 1958	1.8		1.85
7 31 1958	4.37		2.11
8 1 1958	3.59		2.26

Alpha radiation is composed of highly energetic, charged particles that are emitted from radioactive elements such as radium. They have ionizing powers 100 times those of beta radiation and 10,000 times those of gamma rays. Externally alpha particles are not a major health hazard as they have very little power to penetrate tissue. They can be stopped or absorbed by a few cm. of air or a piece of paper. However, they may be quite damaging if swallowed or inhaled.

Beta radiation is also composed of particles that are given off at high speeds by many radioactive products. They do not have as great an ionizing power as alpha particles, but they have a greater penetrating ability. Beta particles will travel several hundred times further in air than alpha particles and require a few mm. of aluminum to stop them.

X-rays and gamma rays are very similar. They both have less ionizing effect than alpha or beta particles, but, depending on their energy, will penetrate as much as one inch of lead or twenty-four inches of concrete.

From a public health standpoint, all ionizing radiation is considered harmful and no unnecessary exposures should be condoned. On the other hand, public health officials have no desire to produce unwarranted fears when they suggest judicious control of ionizing radiation. With the potential benefits in mind, no one should hesitate to accept diagnostic or therapeutic x-ray recommended by qualified medical personnel.

The determination of harmful effects of ionizing radiation in massive doses is a reasonably simple problem. Conversely, the detection and the evaluation of the effect of low repetitious doses is difficult, and a problem that may extend over many years. It is these repeated doses that may be detrimental to the mass of our population.

Information as to the effects of radiation on man has been derived from four main sources; radio-therapeutic

experience; occupational experience (including that from accidents); experience from atomic bomb explosions; and animal studies. Both x-rays and gamma rays from radium have been used for many years in the treatment of disease. Observations of patients receiving radio-therapy has yielded information on the general effects of radiation and the therapeutic use of radio-isotopes has produced data on the effects of radioactivity within the body.

The average dose to the public of ionizing radiation at present comes from several sources. (For the purpose of comparison, the following figures from the Medical Research Council bulletin "The Hazards To Man Of Nuclear And Allied Radiation," are estimated yearly dosages to the gonads). Cosmic rays = 28 mr., natural radionuclids in earth and housing 43 mr., internal radiation from natural sources in food and water = 20 mr., diagnostic and therapeutic x-ray = 95 mr. The external dose from fallout has been calculated to be 2 mr. per year for the average person in the next 50 years from the bombs that have already been detonated.

The internal dose from man-made sources is still to be evaluated, and there will no doubt be a considerable controversy as to the amount that will constitute a maximum acceptable dose. However, it appears that no exposure should be disregarded merely because it is seemingly trivial.

The x-ray machine, a major source of ionizing radiation hazard is constantly being improved to provide more protection not only for the public but also for the radiologists and x-ray technicians. Filters are used to remove the low energy rays that in the past destroyed body cells but did not contribute to a better x-ray plate. Cones are used to direct and concentrate the x-rays to the exact portion of the body in question, and in some cases shields are used over portions of the body not being x-rayed. High speed films are now used, therefore cutting the exposure times and reducing the hazard to patients and x-ray workers. In addition, by the use of improved techniques and better shielding, the danger to radiologists and x-ray technicians has been lowered.

At this point it would be well to mention the so-called, shoe-fitting fluoroscopes. There were 52 of these machines recorded at one time in the State of Maine. From a recent survey, it appears that the use of these machines has been in most instances greatly curtailed and in some cases removed from service. In general, it can be said that the machines were more or less of a sales "gimmick," and they do not serve any useful purpose in the fitting of shoes. The legislature has just passed an act which the Governor has signed, prohibiting the use of x-ray shoe fitting machines in the State of Maine. It would appear that this step is very definitely in the public interest.

Rules and regulations relating to radioactive materials, x-radiation, and other forms of ionizing radiation are being prepared by the Department of Health and Welfare. It is expected that within a short time these rules

and regulations will be sent out to all potential users of ionizing radiation. According to present plans, they will require the registration of every ionizing radiation source in the State of Maine which otherwise might be required by the Atomic Energy Commission. These registrations are expected to be subject to annual renewal, and any newly acquired source of ionizing radiation will need to be registered within 30 days after acquisition.

The rules and regulations referred to are based largely on the recommendations of the National Committee on Radiation Protection as published in the handbooks of the National Bureau of Standards and of the Atomic Energy Commission. They will apply to all hospitals, practitioners of the healing arts, veterinarians, research workers, manufacturers, and other persons using a source of ionizing radiation.

Ionizing radiation sources in this State consist not only of x-ray machines for medical purposes, but also an increasing number of isotopes in medical practice, research, and industry. Hospitals are using iodine — 131, phosphorous — 32, gold — 198, and Strontium — 90 in medical treatments. Research workers are using carbon — 14, sulfur — 35, chlorine — 36, phosphorous — 32, and many other isotopes in tracer studies. In industry polonium — 210 is used in static eliminators, Strontium — 90, krypton — 85, cesium — 137 and other isotopes are used in beta gauges to measure the thickness of products such as paper, and cobalt — 60 is used to a large extent for radiographic work in the inspection of metal welding. Also, several industries in the State use thorium or uranium chemicals in the production of their goods.

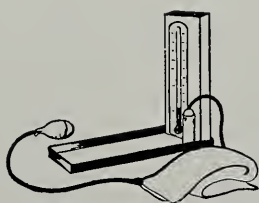
In the field of x-ray protection, the Division of Sanitary Engineering has provided a film badge monitoring service for over three years. At present there are 48 radiologists, 215 hospital x-ray technicians, 13 dentists,

5 veterinarians, 18 research workers and 11 industrial employees, utilizing this service. The films used in the badges are normally sent into our laboratory at two week intervals, where they are developed, and the film densities compared with the density of films that have been exposed to known amounts of ionizing radiation. This service has resulted in lower doses of stray radiation to x-ray personnel by pointing out the deficiencies in shielding, and improper operation of techniques. An accurate record of the accumulated dose of each user is being compiled and will be available at the end of the year to those who are using the badges.

A complete check for radioactivity has been made on the public water supplies in the State, but because the majority of these supplies are surface waters the radioactivity was found to be insignificant at present.

Within the last year an extensive investigation has been started to determine the radioactivity of ground water in the 25 mile wide belt of granitic intrusions, called pegmatites, that extends roughly in a northwestern direction, on a diagonal from Bath, Freeport area, to the vicinity of Bethel and Rumford. These pegmatites contain small amounts of uranium ores distributed in seams throughout the granitic masses. As ground waters percolate through the pegmatites radioactive minerals are dissolved. Some of these waters contain amounts of radioactivity in excess of the present accepted maximum standards for potable waters. A great deal of work will need to be done on this problem before a proper evaluation can be made of this potential health hazard. Future plans of the Department include extensive activity in this field.

It is hoped that in the near future the Department will be able to publish more detailed studies and information which will be useful to many sources in the State interested in and concerned with this whole field of radioactivity control.



Necrologies

LEROY C. GROSS, M.D.

1898-1959

Leroy C. Gross, M.D., of Auburn, died unexpectedly January 23, 1959, following a brief illness.

Dr. Gross was born in Vinalhaven, Maine on November 3, 1898, the son of Daniel A. and Florence C. Gross. He attended grammar school and high school in Vinalhaven and received a B.S. degree from Bates College in 1921. Following his graduation from Bates, he taught biology and was Athletic Director at the high school in Kenmore, New York until 1924 and was science teacher at Winchendon, Massachusetts until 1926. He then entered Tufts Medical School and received his degree in 1930. He served as Junior Intern, Surgical Service, 1929-30, and as Intern, Obstetrical and Gynecological Service, 1930-1932, both at the Boston City Hospital, following which he did general practice at St. George, Maine.

Dr. Gross came to the Central Maine General Hospital in 1933 and served for one year as Resident Physician. He became Obstetrician-in-Chief of the newly created Obstetrics Service at this hospital in 1934 and held this position for almost twenty-five years. He was president of the Central Maine General Hospital staff from 1944 to 1946. In 1934, he entered private practice in Auburn and maintained his office there for the practice of Obstetrics, Surgery and General Practice until his death.

Dr. Gross was a member of the Androscoggin County Medical Society and the Maine Medical Association and was an active member of the Committee on Maternal and Child Welfare. He was also a member of the American Medical Association. A physician to the Lewiston and Auburn Children's Home, he was also the athletic doctor for the Edward Little High School, Walton and Webster Schools in Auburn.

An aviation enthusiast and a member of the Southern Maine Aero Club, Dr. Gross became a licensed pilot in 1946. He also liked to hunt and fish. He was a member of the Tenants Harbor Masonic Lodge and of the Lewiston-Auburn Rotary Club.

Surviving Dr. Gross are his widow, the former Eva M. Dowers; a daughter, Miss Regina Gross of Auburn; two sisters, Mrs. Percy McLaughlin of Danforth and Mrs. Ann Carver of Vinalhaven, and several nieces and nephews.



Dr. Gross was esteemed and respected by his medical associates who point with great pride to his life of dedicated service to medicine, to his community and to his society.

ARDENNE A. STOTT, M.D.

1883-1959

Ardenne A. Stott, M.D., of Woolwich, died February 9, 1959.

Dr. Stott was born on March 16, 1883 in Reading Massachusetts, the son of J. Albert and Frances Williams Stott. He attended the public schools of Reading and the Massachusetts College of Pharmacy. He received his medical degree from Tufts Medical College in 1907 and did postgraduate studies in gynecology and surgery in Philadelphia and surgery at the Massachusetts Homeopathic Hospital. He served on the staff of the National Soldiers Home at Togus, until 1908 when he moved to Woolwich. He was a member of the medical-surgical staff of Bath Memorial Hospital for over 50 years.

In 1957 Dr. Stott became an honorary member of the Lincoln-Sagadahoc County Medical Society and the Maine Medi-

cal Association. He was a member of the American Medical Association and a fellow of the American College of Surgeons.

Serving in two wars, Dr. Stott was ranked as captain in the Naval Reserves. In 1917 he was with the Maine Medical Unit which was sent to Halifax, Nova Scotia following the disastrous munitions freighter explosion. He was on duty at the Boston Naval Shipyard in the First World War. In World War II Dr. Stott again entered the Navy in service to his country. During that conflict he had duty at the Portsmouth, New Hampshire naval facility and served as inspector of all military induction and recruiting centers in Ohio, West Virginia and Kentucky.

Dr. Stott is survived by his widow, Mrs. Edna Marr Stott, Woolwich, and one daughter.

CYRIL E. BOUSFIELD, M.D.

1870-1959

Cyril E. Bousfield, M.D., of Woolwich, died March 1, 1959.

Dr. Bousfield was born on October 30, 1870 at Bishop's Hull, England, the son of Christopher W. and Ellen Aldridge Bousfield. He received his B.A. and M.A. degrees from Christ College, Cambridge, prior to ordination as a minister in 1894. He went to China as a missionary after serving for two years as curate of Dunchurch, St. Paul's, London. In 1898 at Ningpo he married Miss Lillie Snowdon, who died at Woolwich in 1946. During the Boxer Rebellion Dr. and Mrs. Bousfield escaped to Japan and came to the United States. He served as pastor of Baptist churches at East Lebanon, Litchfield, and Woolwich before returning to China in 1910.

Impressed by the need of the Chinese people for medical aid, Dr. Bousfield studied at Harvard Medical School while on annual furloughs for three years and also at St. John University, Shanghai. He received his degree in medicine from the Uni-

versity of Pennsylvania and then practiced for many years in China, specializing in treatment of leprosy. In 1937 he returned to the United States to serve with the Maine Sea Coast Missionary Society for a year before becoming the island physician at North Haven. He moved to Woolwich in 1941 to practice medicine as long as his health permitted.

Dr. Bousfield was a member of the Lincoln-Sagadahoc County Medical Society, the Maine Medical Association and the American Medical Association. A 32nd degree Mason, he was a life member of Dunlap Commandery, Knights Templar, Bath.

Surviving are his widow, Mrs. Sarah Bagley Wright Bousfield, Woolwich; two sons, Dr. Weston A. Bousfield, Storrs, Conn., a professor at the University of Connecticut, and the Rev. Neal D. Bousfield, Bar Harbor, of the Maine Sea Coast Missionary Society; one sister, Mrs. Ellen Lee Reigate, England; and four grandchildren.

ROMEO A. BERNARD, M.D.

1897-1959

Romeo A. Bernard, M.D., of Lewiston, died March 3, 1959.

Dr. Bernard was born on November 3, 1897 at Auburn, Maine the son of Eleuthere Olivier and Methilde Marquis Bernard. He received his B. A. degree from Bates College in 1921 and his medical degree from Tufts Medical School in 1926. He interned at Carney Hospital, Boston, Bellevue Hospital, New York City, and St. Mary's Hospital, Lewiston where he

remained after receiving his Maine license in 1929. He was a member of the general staff of this hospital for over 30 years.

Dr. Bernard was a member of the Androscoggin County Medical Society, the Maine Medical Association and the American Medical Association.

He is survived by his widow, Violet Caron Bernard, and one sister, Miss Laura Bernard of Lewiston.

GEORGE W. HOLMES, M.D.

1876-1959

George W. Holmes, M.D., of Belfast, one of the nation's leading cancer research pioneers, died on March 18, 1959.

Dr. Holmes was born in Belfast on December 27, 1876, the son of George Orlando and Laura Bartlett Holmes. He was educated in Belfast schools. After receiving his medical degree from Tufts Medical School in 1906, he served internships at the Long Island Hospital and the Boston City Hospital. In 1911 he began his career in roentgenology as assistant to Dr. Walter Dodd at the Massachusetts General Hospital. Here he became a pioneer in the use of X-ray treatments for tumors and from 1917 until his retirement in 1941, he was head of the department of radiology. In World War II he was recalled to active duty as chief of the same department at the hospital.

Dr. Holmes was clinical professor of roentgenology at the Harvard Medical School from 1931 to 1941 and a member of its faculty for 28 years. He was coauthor with Howard E. Ruggles, M.D. of a widely used manual for medical students

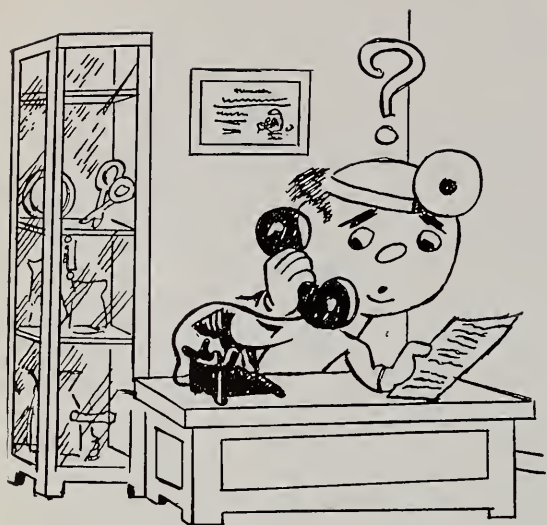
and practitioners entitled, "Roentgen Interpretation." During his years in Boston he trained more than 100 students.

He returned to Belfast in 1946 where he served as radiologist at the Waldo County General Hospital. He participated in the plans for this hospital's new building which opened last year.

Dr. Holmes became an honorary member of the Waldo County Medical Society and the Maine Medical Association in 1956. He was also a member of the American Medical Association and the American Board of Radiology.

He had served as chairman of the trustees of the First Church in Belfast, chairman of the Belfast Public Health and Nursing Association and the Belfast Rotary Club.

Surviving Dr. Holmes are his widow, Mrs. Elsie Young Holmes, a sister, Mrs. Eben F. Littlefield, South Portland; and two brothers, Clube B., Belfast, and Jay E., Reading, Pennsylvania.



ANSWERING QUESTIONS



Are We Taking Blue Shield For Granted?

We doctors are just as human as our non-medical friends. And we might as well confess that we share all the perversities of human nature — most of which seem so magnified when people became patients.

One of mankind's most dangerous perversities is to take for granted so many of life's blessings which were secured to us only by heroic effort and sacrifice on the part of our forebears.

Thus it is with our political freedom. As John Philpot Curran warned our infant nation in 1790: "The condition upon which God hath given liberty to man is eternal vigilance; which condition if he break, servitude is at once the consequence of his crime and the punishment of his guilt."

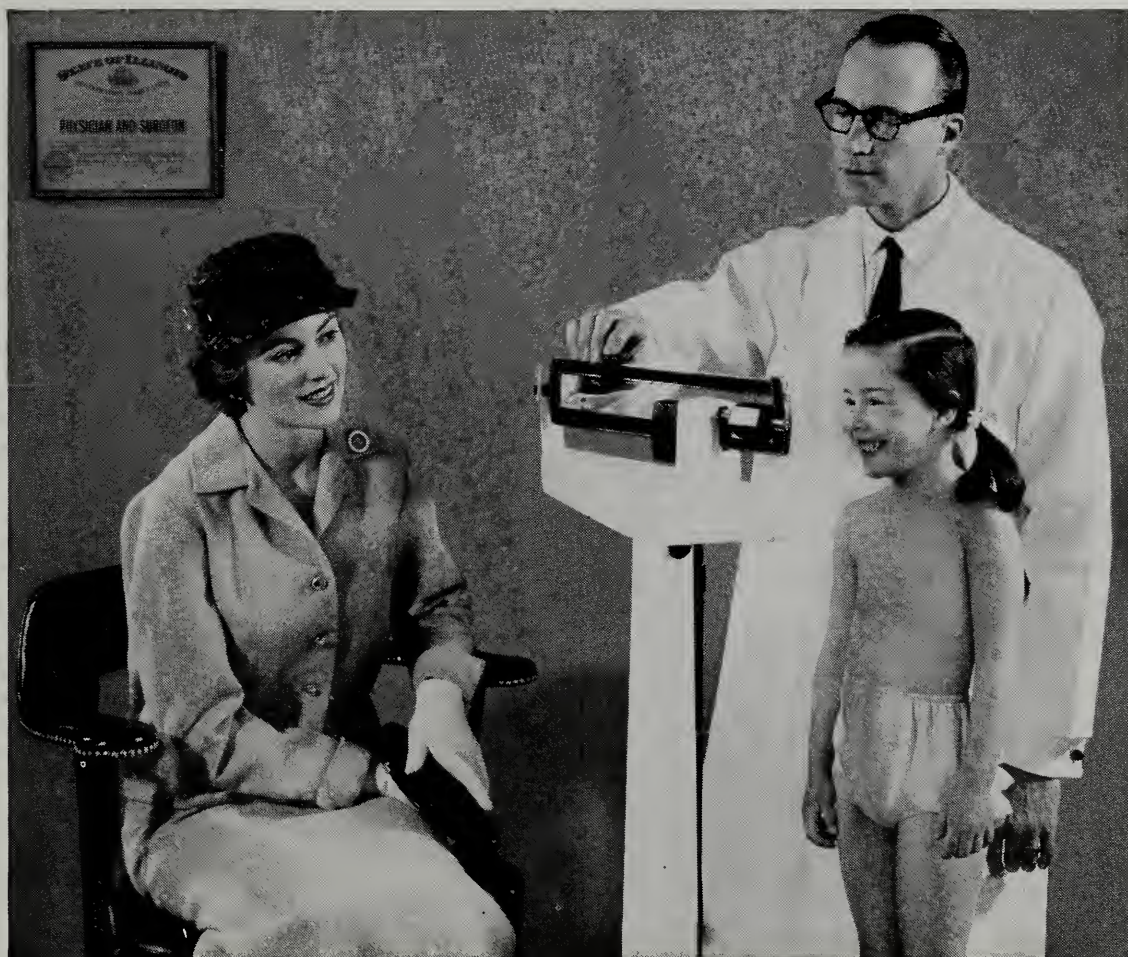
Twenty years ago, when the American Medical Association, in special session, endorsed the principle of voluntary health insurance, American doctors in many scattered places began the long hard task of creating American medicine's own unique instrument, that is now known as Blue Shield. Truly, these older brothers of ours struck a great blow for freedom when they built this voluntary prepayment program which now serves one of every four Americans.

In support of their efforts, we must apply our energies to further strengthen and refine Blue Shield. Leadership in the affairs of our Plan now and in the future is a responsibility we cannot delegate nor can we permit it to be abridged.

This will secure the real and practical benefits of the Blue Shield Program for the public good — a principle to which medicine has always been fundamentally dedicated.

Indeed, American medicine has too great a stake in the future of voluntary health insurance to ignore Blue Shield. For when we doctors created Blue Shield we not only pioneered the wilderness of prepayment and built our main bulwark against socialized medicine, we also identified ourselves with an idea and a program to which the people of America have given a tremendous endorsement.

Eternal vigilance is indeed the price of our freedom in medicine.



Underweight Children Gain and Retain Weight with Nilevar[®]

One of the most convincing evidences of the anabolic activity of Nilevar, brand of norethandrolone, has been its ability to improve appetite and increase weight in poorly nourished, underweight children.

A highly important feature of the weight gain thus produced is that it is not ordinarily manifested by deposition of fat but as muscle tissue resulting from the protein anabolism induced by Nilevar.

Anorexia and "Weight Lag" Study—Brown, Libo and Nussbaum have reported* consistent and definite increases in rate of weight gain in eighty-six patients, ranging in age from 7 weeks to 15½ years. This beneficial action of Nilevar was observed in the patients with organic and traumatic disorders as well as those whose only complaints were poor appetite and/or persistent failure to gain weight.

In this study, the weight gained was not lost

after discontinuance of Nilevar therapy although many patients did not continue the sharp gains effected by the drug.

The authors are of the opinion that Nilevar is a highly useful anabolic agent for influencing weight gain in underweight children.

When Nilevar is administered to children a dose of 0.25 mg. per pound of body weight is recommended and continuous dosage for more than three months is not recommended.

Nilevar is supplied as tablets of 10 mg., drops of 0.25 mg. per drop and ampuls of 25 mg. in 1 cc. of sesame oil. Further dosage information in Searle Reference Manual No. 4.

G. D. Searle & Co., Chicago 80, Illinois.
Research in the Service of Medicine.

*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

COUNTY SOCIETIES

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Secretary, Donald L. Anderson, M.D., Lewiston

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President, John B. Madigan, M.D., Houlton
Secretary, Clyde I. Swett, M.D., Island Falls

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County Society Notes

ANDROSCOGGIN

March 19, 1959

Paul J. B. Fortier, M.D. presided at the March 19, 1959 meeting of the Androscoggin County Medical Society in the absence of Ross W. Green, M.D., President. Eighteen members were present at this meeting.

Pim W. K. Lighthart, M.D., director of the Androscoggin County Mental Health Clinic, was introduced as the guest speaker of the evening. This was the first anniversary of the founding of the clinic and statistics for the first eleven months' operation were presented. He noted the number of referrals from members of the medical profession and expressed appreciation for their cooperation. A question and answer period followed and Dr. Fortier thanked Dr. Lighthart on behalf of the society.

A short business meeting followed.

February 19, 1959

The Androscoggin County Medical Association met at the St. Mary's General Hospital in Lewiston on February 19, 1959. The meeting was called to order by the President, Ross W. Green, M.D. There were 21 members present.

Alfred E. Swett, M.D. was elected to active membership and Lawrence A. Nadeau, M.D., who is taking a residency at the Veterans Administration Hospital in Jamaica Plains, Massachusetts, was made a junior member.

A motion was passed to send a contribution of \$25.00 to the National Society for Medical Research.

Charles W. Steele, M.D. read a resolution on the death of Leroy C. Gross, M.D. and it was voted that a copy of this resolution be spread on the records and a copy be sent to Mrs. Gross.

Eugene E. O'Donnell, M.D., President of the Maine Medical Association, spoke regarding changes being sought in licensure by the Maine Board of Registration of Medicine. Dr. O'Donnell also presented a report on hospitalization of patients 70 years of age or over at the Mercy Hospital and urged that other hospitals make similar surveys.

The film *The Doctor Defendant* was presented by Paul J. B. Fortier, M.D. Daniel F. Hanley, M.D., Executive Director of the Maine Medical Association, then spoke of a malpractice case being processed at the present time. He also stressed that adequate coverage should be mandatory in view of the number of suits and the awards being granted. A question and answer period followed.

January 15, 1959

The Androscoggin County Medical Society met at the Central Maine General Hospital on Thursday, January 15, 1959. The meeting was called to order by President Ross W. Green, M.D. with 46 members present.

The guest speaker of the evening, Mr. Lucien Hooper, chief analyst for W. E. Hutton & Co. and one of the nation's best known and widely quoted financial writers, gave rules for competence in investments. He analyzed the present financial situation and gave advice to beginning investors. This was followed by a question and answer period.

Horace L. Gauvreau, M.D. was elected to senior membership. A motion was passed that flowers from the society be sent to Albert W. Plummer, M.D. on his 90th birthday.

Otis B. Tibbetts, M.D. presented an interim report of the finance committee.

DONALD L. ANDERSON, M.D.
Secretary

HANCOCK

April 8, 1959

The 327th meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, Maine on April 8, 1959. There were 11 members present.

The meeting was opened by the president, Arthur M. Joost, Jr., M.D. The minutes of the previous meeting were read and approved. James H. Crowe, M.D. reported on the topics discussed at the Interim Meeting of the M.M.A. House of Delegates held on April 5, 1959 in Brunswick, Maine.

Following this the meeting was turned over to the guest speaker, C. Philip Lape, M.D. of Portland, who discussed the Current Concepts of Arterial Reconstructive Surgery in the Treatment of Abdominal Aneurysms, Segmental Arterial Occlusions and Peripheral Arterial Injuries.

RUSSELL G. WILLIAMSON, M.D.
Secretary

New Members

ANDROSCOGGIN

Alfred E. Swett, M.D., 308 Minot Avenue, Auburn.

KENNEBEC

Jean L. Bolduc, M.D., 173 Maine Street, Waterville.

PISCATAQUIS

Odd S. Nielsen, M.D., 85 Pleasant Street, Dexter.

SOMERSET

Louis E. Hornstein, M.D., 220 Water Street, Skowhegan.
Ernest Szelenyi, M.D., Central Maine Sanatorium, Fairfield.

Deceased

KENNEBEC

Roscoe L. Mitchell, M.D., 97 Water Street, Hallowell, April 21, 1959.

LINCOLN-SAGadahoc

Clarence R. O'Crowley, M.D., South Bristol, March 28, 1959.

YORK

Dana B. Mayo, M.D., Route 1, Kennebunkport, April 19, 1959.

"A tranquilizing pill gives the illusion of calm — physical calm without emotional calm. It is like any analgesic pain reliever that reduces the sensation of pain but does nothing about either the pain or the cause of the pain. Sometimes, however, it gives us a respite from the immediate battle, perspective on our problem, time to think, time to realign our defenses against stress and time to find new ways of gaining satisfaction and contentment." Dr. F. G. Ebaugh, Editorial, *Journal of the American Medical Association*, June, 1958, page 1610. Selected by Andrew M. Babey, M.D., Las Cruces, New Mexico.



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MEDIA
or
FRACTURED
TIBIA?**



ACCELERATE THE
RECOVERY
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VARIDASE* BUCCAL TABLETS

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Pearl River, New York

News and Notes



Dr. Stitham

Members Elected To AHS Board Of Directors

At their 1959 annual meeting held in Portland on Wednesday, April 29, Linus J. Stitham, M.D., of Dover-Foxcroft, was elected to membership on the Board of Directors of the Associated Hospital Service of Maine. Doctor Stitham, a member of the Piscataquis County Medical Society, was former chairman of the Maine Medical Association's Health Insurance Committee.

Kenneth W. Sewall, M.D., of Waterville, was re-elected to a three year term as a member of this Board.



Dr. Winchenbach

Francis A. Winchenbach, M.D., of Bath — this state's first director of the national Blue Shield Medical Care Plans, Inc.

Successful Polio Clinic

At the first of a series of polio clinics in the Biddeford-Saco area on Sunday, April 18, over 2,000 residents received injections of polio vaccine. A letter from L. A. Viger, M.D. states, "We have had wonderful cooperation from our doctors and nurses. . . . Hope to have more than 2,000 at the next clinic."

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Announcements

Conduct Of Medical Meetings

Two sheets on Parliamentary Procedure are available for those interested in presiding or taking part in medical meetings. Send a stamped self-addressed long envelope for your free copies to: George F. Schmitt, M.D., 30 S.E. 8th Street, Miami 32, Florida.

American Heart Association

A deadline of June 12, 1959 has been set for submission of abstracts of papers to be presented at the Scientific Sessions and for space applications for scientific exhibits at the 1959 Annual Meeting and Scientific Sessions of the American Heart Association which will be held October 23 through October 27 in Philadelphia. Write to Dr. F. J. Lewy, Assistant Medical Director, American Heart Association for the official forms for submitting abstracts and space applications for scientific exhibits. Inquiries concerning hotel reservations and the Assembly meetings may be addressed to William F. McGlone, Secretary, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Tuberculosis And Other Pulmonary Diseases

The Trudeau School of Tuberculosis and Other Pulmonary Diseases will hold its Forty-fourth Session in Saranac Lake, New York from June 8th to 26th, 1959. This annual post-graduate course is able to provide outstanding instruction at a minimal tuition of \$100.00 for a three weeks session. Inquiries should be addressed to the Secretary, Trudeau School of Tuberculosis and Other Pulmonary Diseases, Box 500, Saranac Lake, N. Y.

The Eighth Annual Symposium for General Practitioners on Tuberculosis and Other Chronic Pulmonary Diseases is going to be held in Saranac Lake, New York, July 6th through 10th, 1959. The registration fee for this five-day Symposium is \$50.00. Write to the Registrar, Chest Disease Symposium for General Practitioners, P. O. Box 627, Saranac Lake, New York for your application blank.

Postgraduate Refresher Course In Hawaii

The University of Southern California School of Medicine offers a Postgraduate Refresher Course in Honolulu and on board the S.S. Lurline from July 29 through August 15, 1959. The Course is set up so that the physician may elect to attend one of several programs so he may choose the topics that will most fit his needs. The Course does not intrude upon afternoons and evenings. For further information write: Phil R. Manning, M.D., Associate Dean, Director — Postgraduate Division, School of Medicine, University of Southern California, 2025 Zonal Avenue, Los Angeles 33, California.

American College Of Chest Physicians

The American College of Chest Physicians announces that its 25th annual meeting will be held in Atlantic City, New Jersey from June 3 through June 7, 1959. A Homecoming Meeting is scheduled for October 14 through October 17, 1959 in Albuquerque, New Mexico. Write to the American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois for further information.



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FROM THE SECRETARY'S NOTEBOOK

Continued from page 180

Eugene E. O'Donnell, M.D. presented the following motion which was duly seconded and was passed.

RESOLVED that the Maine Medical Association is in favor of H.R. 85 and like legislation which proposes to increase opportunity for construction of diagnostic or treatment centers in rural areas with funds from the Hill-Burton Act.

8. Report of Legislative Committee, Wilson H. McWethy, M.D., Chairman.

Doctor McWethy referred to the Legislative News Letter which was sent to each member of the Maine Medical Association on March 25. He called attention to various legislative documents including L.D. 1139, the first bill sponsored by the Maine Medical Association in some time, which has come out of committee as "Ought to Pass." He then gave detailed accounts of L.D. 880 "An Act to Regulate the Practice of Nursing" and L.D. 938 which revises the act regarding chiropractic treatment under the Workmen's Compensation law, and why we oppose these bills.

9. Other Business.

A. The following resolution which was approved by the Council at its meeting the morning of April 5:

RESOLVED that the Alternate Delegate to the American Medical Association be a member of the Council and that the necessary changes be made in the Maine Medical Association Constitution, i.e., Constitution, Article VI will read as follows: The Council shall consist of the President, President-Elect of the Association, Executive Director (if a member of the Association), Secretary-Treasurer (if a member of the Association), the immediate Past President, the delegate and the alternate delegate to the American Medical Association, and one Councilor from each Councilor District. Seven members shall constitute a quorum. (Final action on this resolution will take place at the annual meeting in June.)

B. Re: Nomination of Benjamin Dorskey to represent labor as a member of the Board of Directors of the Associated Hospital Service of Maine. Dr. Hanley stated that this nomination has been approved by the Council and the Health Insurance Committee. (He further stated that he thought it would be to our advantage if the House of Delegates would give its sanction to continue this action.)

A motion that the House of Delegates of the Maine Medical Association go on record as being in favor of recommending to the Associated Hospital Service that the position available on their Board of Directors go to a member of organized labor, specifically Mr. Dorskey, was seconded and was passed.

ANNOUNCEMENT: Dr. Hanley announced that the Board of Trustees of the A.M.A. has appointed Dr. Martyn A. Vickers of Bangor as the Legislative Representative on the A.M.A. Legislative Council for all of the New England states.

The meeting was adjourned at 4:30 p.m.



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Clinical Hypnosis*

CLYDE I. SWETT, M.D., CARL M. HAAS, M.D., AKE AKERBERG, M.D.,

HAROLD A. POOLER, M.D. and DONALD COULTON, M.D.

INTRODUCTION**

We are all aware that every normal person is more or less suggestible. Suggestibility is a characteristic whereby a person, under certain circumstances, will accept and act upon an idea without analysis or criticism. We all use the power of suggestion every day in our patient relationships. The suggestions of encouragement and well-being we give to our patients are important to their recovery.

In clinical hypnosis, the hypnotized patient is much more susceptible to a given suggestion than he is in the waking state. He readily accepts the suggestion passively, without analysis, and having accepted the idea given by his physician, he directly changes it into strongly motivated behavior or response. As a rule, children are much more suggestible than adults. They are always eager to explore the unknown, show less resistance, and so make better hypnotic subjects.

The physician who has been properly trained in the clinical use of hypnosis had added a very useful and powerful tool to his armamentarium in the treatment of the psychosomatic conditions of his patients. The effects of hypnotic suggestions can be quite extensive, affecting just about every psychophysiologic function. It must be emphasized, however, that clinical hypnosis is not a panacea and should not be used for every com-

plaint or on every patient. Its use must always be governed by good judgement and common sense.

There is nothing mystical about hypnosis. All of the phenomena experienced in hypnosis have counterparts in the waking state. Take for example, hypno-anesthesia in which the patient is able to concentrate and produce a block in the sensation of pain and thus be able to undergo surgical procedures without the use of drug anesthesia. We see its counterpart when we find a contusion or laceration on some part of the body that has occurred some time during the day without our being aware of it at the time it happened. No pain was felt. We were so busy concentrating on something else that the nervous system did not register any discomfort whatsoever. Nor is it a case of the physician dominating the will of his patient. In the standard techniques used today in clinical hypnosis, the patient cannot be hypnotized without his full consent, cooperation and concentration. Relaxation techniques of a "permissive" nature are the procedures taught in clinical hypnosis.

No hypnotized patient will ever say or do anything that is against his ethical or moral code. Although the term "sleep" is used repeatedly in inducing hypnosis, the patient does not go physiologically asleep. He only looks and acts as though he were asleep, being motionless and relaxed physically. His eyes may not be closed. He always hears the voice of the operator and knows what is going on around him, but he concentrates on what the hypnotist is saying to him and disregards everything else. He has dissociated his conscious mind from his subconscious and it is the

*Composite of papers presented at the meeting of Maine Chapter, American Society of Clinical Hypnosis, held at the Elms Hotel, Auburn, Maine, Sunday, February 15, 1959.

**Clyde I. Swett, M.D.

subconscious mind with which the hypnotist deals. Everything said to the subject is carefully considered by the subconscious mind before being accepted or rejected. If accepted, every effort is made by the subject to carry out the suggestion. If rejected, the operator then immediately withdraws the unwanted suggestion.

The subconscious mind is the guardian of the individual at all times whether awake or asleep. A good example of this is the sleeping mother who will hear the cry of her baby and become immediately wide awake. All of us have experienced the ability of our subconscious mind to awaken us at an unusual hour merely because we have previously set that time for an important event.

Complete rapport between the physician and his patient is essential to effective hypnosis. Not all persons learn rapidly and not all physicians are good hypnotists. For hypnosis is essentially a process in which the physician acts as an instructor in teaching his patient the phenomena of hypnosis. Any results that are obtained are always the results of the ability of the patient to produce them and never due to any special powers of the operator. Too often the physician is inclined to glory in his own ego, acting as if he has just performed a miracle. This attitude is to be deplored.

According to the teachings of Milton H. Erickson, M.D.¹, international authority on hypnosis, the object of clinical hypnosis is to present ideas to the patient in such a way that he can respond to them with desired behavior. This is the real meaning of hypnosis. The ideas given are in no way different from those the patient receives in his everyday life. Furthermore, it is one thing merely to remove symptoms through hypnosis and another thing to use hypnosis to find the underlying cause of symptoms.

CURRENT STATUS OF HYPNOSIS*

The persistence of erroneous theories of the nature of hypnosis, as well as the misconceptions fostered by charlatans and stage hypnotists, have contributed to a state of bewilderment and confusion in the minds of the public and medical profession alike. The purpose of these papers is to provide a general description of present-day concepts of clinical hypnosis and briefly outline some of the applications being made of it here in Maine. The authors are members of the Maine Chapter of the American Society of Clinical Hypnosis and these efforts are based on their personal experience in the use of hypnosis in daily practice.

That present-day understandings and applications of hypnosis provide a valuable adjunct in medical and dental therapy is borne out in a report by the Council on Mental Health² and acceptance by the American Medical Association in 1958. The findings and recommendations of the Council are in essential agreement

with a report approved by the British Medical Association³ in 1955. Both reports stress that the use of hypnosis should be limited to adequately trained members of the profession within their own fields; that its use for entertainment be condemned, that training programs should be under responsible medical or dental direction and that further high-level research by the professions be stimulated. The American Society of Clinical Hypnosis and many active regional and state professional societies are organized on these principles. They stimulate adequate postgraduate training programs limited to the professions of medicine, dentistry and psychology; set up standards of individual qualification; back legislation designed to limit the use of hypnosis to qualified members of the professions, and sponsor public educational programs concerning proper medical usages of hypnosis. Unfortunately many non-professionals still operate, not only as entertainers, but as quack therapists. More recently some of these have tried to gain respectability by advertising "courses" of instruction to members of the medical profession; their claims of qualification are without foundation.

Modern hypnosis depends on the interpersonal relationship between doctor and patient. There must be trust, confidence and cooperation with the understanding that all suggestions are directed toward achieving goals that fulfill the patient's own individual needs. The physician acts as a teacher, guide, counsellor and partner in helping the patient reach his goals rather than a dictatorial taskmaster giving orders.

It should be stressed that hypnosis is considered as an adjunct supplementing and complementing other usual medical therapies ordinarily employed; it is not a panacea replacing any indicated form of treatment. Its value lies largely in improving our understanding and care of the "total" patient rather than only his symptoms or local manifestations of illness. At times it is a valuable diagnostic aid; in some instances it affords a superior form of therapy. Perhaps most often it is used in conjunction with, or in addition to, other forms of therapy.

The following statements about hypnosis correct some of the most common misconceptions.

1. A person in trance is never unconscious or asleep though he may appear to be so to an observer.
2. There is no surrendering of the subject's will — he can refuse to carry out unacceptable suggestions.
3. A patient will not talk and reveal secrets he wishes to keep to himself.
4. Patients in trance are always able to terminate the trance whenever they so desire — and will do so spontaneously if not eventually awakened by the operator.
5. Hypnosis does not weaken the mind or become habit forming — it is a learning experience.

*Donald Coulton, M.D.

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CLINICAL HYPNOSIS IN OBSTETRICS*

Obstetrics is a "fertile" field for hypnosis. Since expectant mothers are usually normal, healthy individuals with faith in their doctor and a strong motivation to have an easy delivery of a healthy baby, they make good subjects. Most mothers enjoy the experience of pregnancy and childbirth. This point has always been emphasized by advocates of "natural childbirth." However, this latter method has been practical for only a relatively small number of people. Through hypnosis the patient can make her experience of childbirth more comfortable, meaningful and rewarding. The delivery, under hypnosis, is to her such a wonderful event that her entire outlook on life becomes favorably influenced.

According to Kroger⁴ the many advantages of hypnosis are:

1. Reduction or eradication of fear, tension and pain before and during labor.
2. Reduction of chemoanalgesia and anesthesia.
3. Complete control of painful uterine contractions; the mother can choose to experience the sensations of childbirth or not, as she sees fit.
4. Decreased shock and speedier recovery.
5. Lessened incidence of operative delivery.
6. Lack of undesirable postoperative effects such as may be encountered with drug anesthesia; hypnoanesthesia is also more readily controlled.
7. Shortened labor.
8. Increased resistance to fatigue, minimizing maternal exhaustion.
9. Applicable in debilitated individuals, in those who have ingested food shortly before delivery and in those who are allergic to drugs.
10. Hypnotic rapport is transferable to an associate, an intern, a nurse or to the husband — with the patient's permission.
11. No elaborate education or ritualistic exercises needed.
12. No possibility of harm being done to the mother or baby by hypnoanesthesia. The literature offers considerable evidence that when drugs are given for pain relief, they may decrease the oxygen supply to the fetus. Combined with other asphyxial factors such as trauma or difficult delivery, this may produce fetal anoxia and resultant severe brain damage.

With hypnoanesthesia the danger of fetal anoxia is markedly decreased.

13. Childbirth under hypnoanesthesia is an intensely gratifying emotional experience for well-adjusted mothers. Hearing the baby's first cry and seeing him immediately after birth are thrills that mothers can never know when they are "knocked out."
14. Hyperemesis gravidarum is often controllable with one or two hypnotic sessions.
15. Reduction of postpartum depression.

In my own method of training mothers, the patients come to "prenatal classes" lasting one and one-half hours for four sessions. Classes consist of lectures on prenatal care, group discussions and a film, "A Normal Birth,"⁵ is shown. Different methods of pain relief are discussed. One or two patients who have delivered previously under hypnosis demonstrate hypnotic trance. Those who are interested in hypnosis are given a booklet by Heron, "An Old Art Returns to Medicine."⁶ Subsequently trance is induced individually. Patients then meet in groups of four to eight where they are taught autohypnosis and trance deepening. They are instructed to develop local anesthesia in different parts of their bodies. This training program is usually started about the seventh month and three to six sessions are required. During a pelvic examination patients are instructed to develop numbness in the birth canal and to relax the perineal muscles. They are also taught to maintain numbness temporarily in the perineum post-hypnotically. During the last session, the patient is told under hypnosis to enter the hospital completely relaxed, without fear, looking forward to a natural, normal delivery.

When the patient is in the hospital in the first stage of labor, she enters a hypnotic trance by giving herself a prearranged signal, such as putting her thumb and index finger together and taking two deep breaths. She awakes automatically after the contraction is over. When the patient's husband is with her, he can reinforce these suggestions by slight pressure on the patient's wrist. I have found this a greater help as the husband feels he is actively participating in the delivery. When contractions become more intense, the trance is deepened by the nurse or doctor. Eventually the patient is in a deep trance and told to go deeper with each breath, developing anesthesia in the abdomen, back and perineum.

About 25% of the patients can go through delivery without any further medications, allowing forceps de-

*Carl M. Haas, M.D.

livery, breech extraction, episiotomy and repair. Another 50% of the patients can be controlled by giving them 25 mgs. of Phenergan® I. M. and/or a whiff of ether. The remaining 25% need additional medication. It has been noted that many patients become restless when fully dilated and as the baby moves down the vagina. The assurance and calmness of the nurse staying with her is most essential as the patient's trance can be deepened by the proper suggestion. If the patient should become panicky and "break through," standard medications can be employed. Novocain can be used for the perineum if the patient is unable to develop local anesthesia. General anesthesia rarely becomes necessary for the actual delivery.

If the patient wants to observe her delivery, she is told to open her eyes and enjoy it. For episiotomy repair, the patient is asked to close her eyes and go into a deep trance again. A posthypnotic suggestion of complete comfort in the perineum is given; it is also suggested that she may remember as much or as little as she wants to about her delivery. If the patient has experienced some pain, a posthypnotic suggestion of amnesia for the pain is given. Patients who have had no chemical anesthesia or only Phenergan are allowed to sit up and walk immediately after delivery. If the patient is not nursing, lactation is suppressed by appropriate suggestions.

One of the most important factors in the successful use of hypnosis is the cooperation of the nurses in the hospital and its acceptance in the community. If the attending nurses understand hypnosis, they automatically transmit their confidence to the patient. Sometimes a "poor" subject becomes a "good" one in labor because of the support the nurse gives her.

I have found hypnosis of particular advantage in the following special cases. One patient was a severe diabetic in early toxemia. Several were cases of fetal distress and of prematurity. Two were cases of mid-pelvic arrest in whom medication has been discontinued on account of fetal distress. It should be noted that several patients used hypnosis with excellent results when the need arose without any previous training.

CLINICAL HYPNOSIS IN GYNECOLOGY*

Psychogenic disturbances of pelvic organ functions account for half to two-thirds of gynecological practice. There dysfunctions occur as the result of what is variously termed emotional states, nervous tension states, organ neuroses, stress diseases or psychosomatic illness. The mechanism behind these functional disturbances should be briefly outlined to provide the background for a rational approach to therapy under hypnosis.

For many years the pituitary was considered to be the master gland of the endocrine system, independently regulating the other endocrine glands by a balanced system of stimulatory or inhibitory effects of the various

hormones produced. It is now recognized that in this system of balances, the pituitary acts more as a foreman of the other endocrine glands, under the control of the hypothalamus of the brain directly above it. The hypothalamus is a part of the visceral brain having to do with mediating our emotional responses and has direct connections with the autonomic nervous system, as well as the endocrine system via the pituitary. This relationship affords an understanding of how emotional reactions affect body functioning, both through the hormonal and autonomic nervous systems. When there is conscious awareness of the origin of the emotional feelings, the associated bodily reactions are recognized and accepted. When emotional reactions result from subconscious conflicts, the patient is partially or wholly unaware of their origin and the associated bodily reactions therefore are described as "symptoms." Such "symptoms" are often a very direct expression of the subconscious conflict and are referred to as "organ language."

Hypnotherapy can be used to reduce and in some cases eliminate psychogenic symptoms or to redirect the bodily responses into less disturbing channels of expression without uncovering the basic emotional conflicts responsible for them. Hypnoanalysis can be used to uncover basic conflicts and to reorient the patient, resulting in a spontaneous disappearance of symptoms. There is the same degree of lasting effectiveness as from conventional psychotherapy with the advantage of brevity. In general the results are superior to pharmacological and surgical therapies which attack only the symptoms rather than the causative psychogenic factors. When primary or secondary organic disease also exists, a combined approach is often indicated.

In gynecology, hypnosis has been found useful in the treatment of menstrual disorders, frigidity, premenstrual tension, menstrual migraine headache, psychogenic pruritis vulvae, psychogenic sterility and the menopausal syndrome. It also has a wide usefulness in preoperative and postoperative care and in facilitating diagnostic procedures. It can frequently provide adequate analgesia or anesthesia for minor surgical procedures such as curettage and cervical conization. Although major surgery can be done under hypoanesthesia, it is limited to the 10% of patients who can achieve sufficient depth of trance and the patient training required is often time consuming.

The following case histories have been selected either because they represent pure dysfunctional problems or are cases in which therapy was through hypnotic techniques. This does not imply that surgical or pharmacological therapies should be omitted when indicated.

Patient No. 1 was a 23-year-old Para III who complained of amenorrhea of five months duration. There was an associated sudden loss of libido and frigidity. Her previous menstrual cycle had always been regular. Pelvic examination including uterotubogram was normal. Her local physician had previously given her a course of estrogen therapy without result. She denied any

*Donald Coulton, M.D.

significant emotional disturbances immediately prior to the onset of amenorrhea.

She was taught to enter hypnosis and achieved a medium depth trance. Suggestions were given that she could now recall the period previous to the onset of amenorrhea with vivid clarity. After this had been done she related that there had been an emotional disturbance which "she had not gotten over." It involved her husband's revealing a drinking bout followed by infidelity which had occurred some years previously. In trance she was able to relate her reactions to feeling insecure and to a desire to punish her husband. Since it had been an isolated experience, she agreed she was now willing to resume her former role as a woman and wife. Suggestions were thereupon given to this effect indicating the onset of menstruation the next day to be followed by the resumption of her usual normal cycles.

Menstruation began the next morning. Partial frigidity persisted two weeks later, but after another trance session there was complete resolution of the problem. She wrote four months later that her cycle had continued normally and that the sexual problems had ceased.

This case is a good demonstration of the effect that emotional conflicts, which are largely subconscious, have on the menstrual cycle. The frigidity is a good example of the directness with which subconscious feelings are expressed as symptoms.

A 20-year-old secretary complained of incapacitating dysmenorrhea. She had always had modern dysmenorrhea often staying in bed on the first day of flow. For the past six months it had been severe, requiring narcotics and complete bedrest for two or three days of each cycle. Pelvic organs were grossly normal on examination.

The only significant event occurring six months ago was her engagement; she "looked forward" to marriage in a few months. Since time was limited on this first visit, she was taught how to develop a lower abdominal hypnoanesthesia through autohypnosis, this being accomplished as a posthypnotic suggestion. She reported after her next menses that she had succeeded moderately well, staying home from work only one day and not needing narcotics.

On the second session, uncovering techniques were used, revealing that she greatly feared childbirth, as her mother had been "badly torn and permanently damaged" by her home deliveries. Her engagement mobilized these fears, as she wanted and planned on having children soon after marriage. Therapy was directed toward enlightenment about modern obstetrics, combined with reassurance, until a state of self-confidence replaced her previous fears.

She reported five months later that she had had minimal discomfort, being able to work throughout menstruation. She still practiced autohypnosis occasionally when bothered by cramps.

Another patient was a 22-year-old Para II, hospitalized for severe vaginal bleeding of three weeks duration.

An emergency curettage and two transfusions were carried out on admission. Pelvic organs were normal except for a 3½" right ovarian cyst, which was not removed due to the marked blood depletion.

History revealed an emotional crisis immediately before the onset of bleeding involving both a failure of her marriage and loss of maternal support. She felt deserted and totally defeated in life, and particularly in her role as a woman and wife.

She entered a medium depth trance readily. No deep uncovering techniques were used, suggestions being oriented around improving her circumstances. Although this only amounts to support and counselling, it is much more effective if carried out when the patient is in trance.

Next, suggestions were given indicating the dates of her next menses — she also desired a five-day flow instead of her usual seven, and this was included in the suggestions. The final suggestion involved subsidence of the functional ovarian cyst as the emotional disturbance subsided.

Vaginal staining continued until the next menses which began on the day suggested, 28 days after the curettage, and lasted 5½ days. The cyst was markedly reduced in size, though still detectable. Further trance sessions were limited to supportive therapy. Menstruation continued regularly, with a cycle of 26 to 29 days, each flow lasting five days. The cyst had entirely disappeared after the second menses.

Dysfunctional uterine bleeding is a common result of emotional disturbances. Heiman⁷ had stated that "if normal menstruation is the weeping of a frustrated womb, dysfunctional bleeding in the mourning of the womb over a lost loved (one) object." Robertson⁸ has drawn attention to the development of functional ovarian cysts from similar emotional disturbances. Under such circumstances, hypnotherapy can be an effective adjunct to other forms of therapy.

Patient No. 4 was a 32-year-old Para III who complained of primary frigidity. A course of testosterone had aggravated the problem resulting in an aversion to intercourse.

Hypnosis was employed to uncover the origins of her emotional reactions. By the use of memory recalls, she was able to relate her feelings to "forgotten" traumatic sexual experiences at about the time puberty. After three sessions sufficient insight and reorientation had occurred so that the frequency of intercourse had increased to two-to-three times weekly; the patient having an orgasm about two times in three. These responses have continued satisfactorily for over a year with the exception of three months during which time she was pregnant and miscarried; during pregnancy sexual desire and orgasm temporarily disappeared.

A 26-year-old Para I had a pan-hysterectomy and bilateral salpingo-oophorectomy because of an extensive adenocarcinoma arising in the right ovary, followed by a course of irradiation therapy postoperatively.

Preoperatively, she was an apprehensive, anxious patient who dreaded surgery, although at that time the diagnosis of malignancy was unknown. She was taught to enter hypnosis and suggestions of confidence and calmness were given. These suggestions resulted in an obvious, beneficial change in her attitude. On the morning of operation trance was again induced followed by suggestions to enjoy the recall of a pleasant experience to be continued until anesthesia was given. This too was carried out very satisfactorily.

Postoperatively, she became very apprehensive, fearful and depressed when informed about the diagnosis of malignancy and the extent of surgery carried out. Hypnosis was again used and the psychic trauma explored. In trance she was able to verbalize her chief fears which related to death and loss of her womanhood through castration and sterility. Her death fears were overcome by persuading her to place her reliance completely on her doctor's advice and in following therapies faithfully.

Although her fertility could not be altered, it was suggested that this was only one attribute of femininity that could be compensated for by excelling in other feminine characteristics and activities; specifically that her energies could be poured into her role as a wife and mother in an even more satisfying manner than ever before. Not only did this reassure the patient in the immediate postoperative period, but it was the basis for later suggestions which all but eliminated menopausal symptoms; hot flashes never appeared more than once or twice a week in very mild form. Sexually she eventually became more capable and adequate than ever before, according to her husband.

At the conclusion of the course of irradiation she developed a marked reaction in her bladder with gross hematuria, severe dysuria and constant incontinent dribbling. Again hypnosis was utilized, this time to teach her to develop a lower abdominal hypnoanesthesia. Although the gross hematuria continued for several days, both the dysuria and dribbling were completely controlled except for one to two hours each night when, for unexplored reasons, all her urinary symptoms returned; during the rest of the 24 hours she voided about every three hours without discomfort.

This case is of particular interest in that it demonstrates the versatility of what has been called the "multi-faceted tool of hypnosis" in meeting a variety of situations, each utilizing a different approach, but all oriented to the patient's basic needs.

CLINICAL HYPNOSIS IN ANESTHESIOLOGY*

To the modern anesthesiologist hypnosis presents a great challenge. A close look at the oldest of all methods of anesthesia reveals a technique which is not difficult to master; which can be efficient for even the longest surgical procedures of today and yet is free of all side effects. It sounds very promising, and it is.

Hypnoanesthesia is an important adjunct to modern anesthesiology. It requires no apparatus, drugs, or training in anesthesiology, for it is absolutely safe. It can be used anywhere without special preparation. Its side and aftereffects are not comparable to those of drug anesthesia. The patient can cooperate with the surgeon or change position at any time. It can be used where drug anesthetics are contraindicated. Milton J. Marmer and W. S. Kroger⁹ of the Chicago Medical School, among others, have reported about its use in operations such as Cesarean-hysterectomy, thyroidectomy and open heart surgery.

We realize that only 10 percent of patients requiring major surgery are able to reach the necessary depth of hypnosis needed for this type of anesthesia. Furthermore many anesthesiologists lack the interest and the personal qualifications to include this method of anesthesia among their other techniques. And finally there is the time factor. The patient has to be conditioned to hypnosis. This leaves a limited number of surgical patients who are suitable candidates for hypnoanesthesia alone.

What, then, has the use of hypnosis to offer to the busy anesthesiologist in today's modern hospital? We believe it to be a valuable adjunct especially for alleviating fear, tension and apprehension and thereby raising the pain threshold. Between 25-50% of all patients scheduled for surgery required only a minimal amount of preanesthetic medication when properly prepared through hypnotic techniques. Reassurance and suggestions given during trance can change the anticipation of operation from a nightmare to an experience which the patient looks forward to with confidence and calmness of mind.

Postoperatively, atelectasis and pneumonitis can be prevented by hypnotic techniques even when chemoanesthesia has been used. Hypnotic relaxation can be used to facilitate passage of a catheter for aspirating tracheo-bronchial secretions. Posthypnotic suggestions can be useful in encouraging deep breathing, stimulating the cough reflex and reducing or eliminating postoperative vomiting. Hypnoanalgesia or anesthesia of the operative site relieving postoperative pain can reduce or eliminate the need for narcotics.

Hypnosis can be of value to the anesthetist in the preoperative, operative and postoperative care of the surgical patient. As more people become conditioned to hypnosis by previous experience and as more anesthesiologists become experienced in its use, the more we shall see hypnosis employed both alone and as adjunctive therapy in surgical patients.

CLINICAL HYPNOSIS IN PSYCHIATRY**

The general practitioner, the internist, the surgeon,

*Ake Akeberg, M.D.

**Harold A. Pooler, M.D.

the anesthetist, the obstetrician and, in fact, every doctor could be a better doctor if he knew the methods used in applying hypnosis. He would learn to apply suggestion efficiently and suggestion is the basic element of hypnosis. Even if the doctor never put a patient in a hypnotic trance he would still use suggestion and, thereby, practice better medicine. The doctor may say, "I am changing your medicine. This is something new and is sure to help you." And it does. Isn't this suggestion? He could do an even better job of suggestion if he knew the principles of hypnosis.

The psychiatrist who uses hypnosis does not use it in every case. The writer has had little or no success with it in treating the psychotic or the real psychopath. The cases to which hypnosis can be beneficially applied are the neuroses, the anxiety neuroses, alcoholics occasionally and the hysterics particularly. Psychosomatic problems, such as aphonias, psychic blindness, paralyses, sleepwalking, urticarias and other skin conditions often respond to hypnotherapy. Since these symptoms are expressions of an emotional conflict, psychological "probing" has to be used if they are to be permanently relieved. Because of this, the psychiatrist does not recommend that a doctor untrained in psychotherapy attempt to treat the patient any further than relieving the immediate symptom. Furthermore, applying hypnosis in these cases is not always easy since the patient does not have the degree of motivation for relief as does the pregnant woman who wants to be relieved of pain at delivery.

The type of neurosis which responds best to hypnosis is the anxiety neurosis wherein the patient expresses symptoms of anxiety, insomnia, tremulousness, fear of going insane, fear of the unknown and loss of interest in family. Hypnosis helps these patients to accept the symptoms more calmly. Hypnosis does not, by itself, solve the patient's problems but it greatly helps the patient to accept psychotherapy. It is extremely gratifying to watch a patient who first comes into the office crying, pacing the floor and screaming "you know I'm going crazy!" begin to relax, become calm and, as a result of suggestive procedures and reassurance during the hypnotic trance, go out of the office feeling better. Of course the patient is not cured suddenly. He has to be seen a number of times before beginning to really improve.

It might be interesting to describe a case which shows the application of hypnosis. The case is one of hysteria manifested by a sudden attack of aphonia. A young married woman came into the general hospital with the inability to say one word or to make any sound. She was examined by the resident and by the E.E.N.T. consultant before she was referred to the writer. The sudden complete aphonia was easily recognized as psychogenic in origin. Because of this the writer decided to use hypnosis and, with the resident and a nurse present, tried to induce trance but with little apparent success. Noticing the patient seemed fearful, the writer asked, "What's the matter? Do you think

that I am trying to hypnotize you?" "Yes," said the patient. The writer replied, "Well, I am trying to hypnotize you." The patient thereupon closed her eyes and with little further suggestion, went deeply into a trance. The patient was then persuaded to gradually increase the volume of her voice until she talked normally. She was given suggestions that when she awoke, she would continue to talk normally. This she did.

Such a "cure" required further investigation. She was again hypnotized and then could recall that on the day she became mute, her young child was outside presumably in a play pen. But upon looking outdoors she saw the child crawling in the street as a large truck thundered towards him. She was so shocked that she could not speak.

She no longer has aphonia and lives a normal emotional life.

Hypnosis or the principles of hypnosis are not going to eliminate all other methods but in certain cases, they will help the doctor to better understand his patient and by this approach to therapy, learn more about the patient's illness. The doctor is not going to start out by hypnotizing the patient. He is going to use his usual methods of analyzing the case and then if hypnosis is indicated, he will use it. Prejudice has always been a great deterrent to knowledge and prejudice has been a great deterrent to the knowledge of hypnosis.

CLINICAL HYPNOSIS IN MEDICINE AND SURGERY*

In surgery, hypnosis has many valuable uses. Patients who have used hypnosis have much less post-operative shock and they recover more quickly from their operations. Its ability to remove all preoperative tension, anxiety and fear is truly remarkable. All post-operative discomfort can be removed, such as soreness or pain at the operative site, nausea and vomiting. Capillary bleeding can be controlled to some extent. Patients also have the ability to move about and change position without discomfort. If necessary, they can lie quietly in unusual positions very comfortably for days. This is very helpful in making pedicle grafts and in those situations that require uncomfortable apparatus.

Hypnotic suggestions can be very helpful in many situations arising in everyday practice. Painful manipulations and procedures in the office or home can be performed without discomfort. Lacerations can be sutured, changes of painful burn dressings done and many other procedures accomplished with the patient remaining comfortable and cooperative.

In internal medicine, hypnosis has many uses, as in the treatment of skin conditions, asthma and other allergies, chronic mucous colitis, various other gastrointestinal disorders, cardiovascular conditions, genitourinary instrumentations, headaches, backaches, joint and muscle pain, organic as well as functional.

*Clyde I. Swett, M.D.

Its most extensive field to date has been in psychotherapy, called hypnotherapy. Hypnosis was used in this field long before the introduction of psychoanalysis. The decline of interest in hypnosis at the time of Freud was largely due to its nonrational use. With the greater understanding of hypnotic phenomena and psychotherapy today, suggestive methods have come into prominence, especially in the treatment of behavior disorders. Hypnosis is now playing an important role in the treatment of such major problems as psychoneuroses, psychoses and alcoholism. It is also successfully used in enuresis, insomnia, obesity, nail biting, excessive smoking, stage fright, motion sickness and speech disorders. In general, one of the best features of hypnosis for the psychotherapist is its ability to speed up psychotherapy through "uncovering" and "regressive" techniques.

It is in this field that a word of warning should be given to the general physician. Removal of symptoms alone in many of these conditions is usually only temporary and usually unsatisfactory if the cause of the symptoms is not removed. Furthermore, should the untrained physician seek to uncover the hidden conflicts or causes without proper understanding of the psychodynamics or processes involved, he might do the patient actual harm. One should always refer complicated cases to a qualified psychiatrist for treatment. This is not a general indictment against the use of hypnosis by the general physician. One would not expect to see the generalist doing brain surgery either.

A few examples of the uses of clinical hypnosis in the practice of the author will illustrate some applications in general practice.

This patient, age 48, wanted a mole removed from her arm but was afraid of a needle for local anesthesia. On her first office visit she was easily put into a deep hypnotic trance. At that time she was taught various hypnotic phenomena, including how to produce an area of hypnoanesthesia at the site of the mole. The next day in the outpatient room of the hospital, hypnosis was again induced. She was told to produce an anesthesia of the upper arm; that she would feel no discomfort and would not be concerned or aware of what was being done. She was then asked if she would like to relive an enjoyable experience. Upon assenting, she was told that she could now go back to that situation, relive and enjoy it. Removal of the mole was done without the use of any drug anesthetic. Upon completion of the surgery, she was awakened and asked if she wanted to tell about her experience. She stated that it was two weeks ago on a previous visit to New York and that she had enjoyed a whole evening of dancing all over again. Upon learning that her mole had been removed while she was dancing in New York, she could not believe it until she looked at her arm. About two months later the same patient returned with a very painful arthritis in the knee joint. Deep hypnosis was again induced and she was told she would be com-

pletely comfortable while the joint was examined. Amnesia was suggested for the whole experience and she was then awakened. She stated that all she remembered was the "very relaxing rest." It is not always necessary to get the patient into a deep trance, as considerable therapy can be done very effectively in the lighter stages.

The second patient, age 24, had always been a problem to her dentist in that she had a marked gagging reflex and was very uncooperative. She wanted to know if she could use hypnosis for a dental appointment. She came to the office about 30 minutes before her dental appointment. She had previously been taught hypnosis, so readily went into a trance. Appropriate suggestions were given her and she awakened to go to her dentist's office. The dentist had never had any experience with hypnosis so he was phoned and told that his patient would go into hypnotic trance as soon as she sat in the dental chair (posthypnotic suggestion); that he would probably be able to do any dental work she required without discomfort and that when she got out of the chair, she would come out of the trance. As a precaution, he was told she had been instructed to follow his suggestion to awaken in case she was too relaxed for him to properly work in her mouth. The dentist later reported that the patient sat in the chair but appeared to be her usual self, talking with him and apparently wide awake. He did notice, however, that her eyes looked rather "stary." He was surprised to find that the probe and drill did not bother her or cause pain.

A ten-year-old boy suffered a closed fracture of the femur in a skating accident. He was hospitalized in traction. He appeared unduly nervous, irritable, tense and unmanageable, refusing to cooperate with his nurses. About a week later, it was decided to do an open reduction and use a bone plate. Obtaining his parents consent, he was taught hypnosis for the purpose of removing his nervous tension and prepare him for surgery. During the hypnotic session, it was learned that his accident had produced psychic trauma. He was asked to relive his terrible experience and while recalling the accident, the situation was explained to him and the details of the accident were dimmed in his mind. He was then awakened. Events transpired according to the suggestions given him and everyone concerned, including his parents, was amazed at the complete change that had taken place in the whole situation.

Sometimes it is of advantage to use preoperative hypnosis and then leave the patient in trance throughout the surgery. A case to illustrate is that of a young girl who was frantic with fear when she learned that an emergency appendectomy would need to be performed. She was hypnotized and reassured during trance and underwent her surgery uneventfully. The next day when making rounds, the floor nurse reported that the patient was doing fine but that she had not awakened

from her anesthesia. Upon going to the bedside, it was obvious that the patient was still in trance and resting comfortably. She was awakened and when asked how she felt, stated that she felt fine.

A 50-year-old male had an amputation of the left arm above the elbow several years ago. He had always been troubled with "phantom limb" and an intense burning sensation in the stump. He previously had had examinations and a few injections of the stump without success. In one session hypnosis was induced and an explanation of his symptoms given while in trance. He was convinced he did not have to keep his symptoms and that there was no need for them to recur. Upon awaking from trance, his symptoms had completely disappeared. This treatment was three months ago and there has been no recurrence. It is too soon to know how successful this treatment will be. However, it is a simple matter to fortify the previous suggestions, should his symptoms return.

The next case is a 38-year-old female who is a typical psychoneurotic. She has had several surgical operations for a multiplicity of complaints that change pattern from time to time. She came to the office for a chronic, persistent eczema of the face, body and extremities that was driving her frantic with severe itching. She had been to two skin specialists, had many skin tests and been found allergic to many things, but treatment over a long period had been of no avail. She wanted temporary relief from the itching even if nothing else could be done. In trance, she was taken back to the age of seven, the time her neurotic symptoms began. While in trance she disclosed that her mother had taken her to an eye specialist for an iritis. Leaving the girl in another room alone, the doctor talked with the mother and told her that the daughter had congenital syphilis and that she could not be cured. The girl overheard this conversation but did not reveal this to her mother or anyone else. She kept it "bottled up" in her subconscious mind and felt that she "had bad blood"; that she was an outcast and inferior to all other persons around her. She was then asked by the hypnotizing doctor if she would be willing to discuss the situation with him after she was awakened. Upon assenting to this, the whole problem was discussed with her in the waking state. She was given an explanation of her problem, emphasizing that she had had three years of intensive luetic therapy, that she had then been given a clean bill of health by the State Department of Health and Welfare and that she had since been able to marry happily and raise a family of normal children. Hypnosis was again induced and the whole situation carefully reviewed with her. It was apparent that she was gaining insight to her condition and the reason for her

many uncomfortable physical and mental complaints. Careful suggestions were given for the removal of most of her symptoms, especially the eczema and itching skin. She was next asked if her remaining inner repression would be satisfied with only a small amount of eczema on the thighs without itching. Often if all of the symptoms are removed arbitrarily, the need for inner release will produce symptoms that may be more devastating than the ones removed. Techniques are often used in such situations wherein an acceptable substitution can be made that is less incapacitating or that can be turned into useful channels for the patient's welfare. Hypnotherapy was begun about ten months ago. She has had eight sessions and the whole mental outlook of this woman has improved dramatically. The only place she has eczema is on the upper thighs and it is hoped that she may be able to dispense with this in time. Needless to say, she is very delighted with the results of hypnotherapy.

Many more and varied uses of clinical hypnosis could be given but these few cases should suffice to point out the need for every physician to make use of this useful tool in his practice. It should be emphasized in closing that hypnosis is not a panacea. It will not always be effective, for various reasons. It should be used only in selected cases and never until a complete history and examination have been done to establish the diagnosis. It does take considerable time and patience but the results are well worth the effort. As our knowledge and techniques improve, so will our results.

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Of Magrath, Spilsbury And Homicides*

CLEMENT F. ROBINSON**

During the first half of this century two great pathologists dominated the investigation of sudden death. Dr. George Burgess Magrath, medical examiner from 1907 to 1935 in the northern district of Suffolk County, Massachusetts, where Boston is located, was supreme in the United States. Sir Bernard Spilsbury, from 1907 to 1947 honorary pathologist to the Home Office in London, was the acknowledged master expert in England and Wales. Strikingly different in personality their methods were the same. Both were meticulous observers and unimpeachable witnesses in court. Both were always plainspoken, precise, judicious and fair. Both of them ruled their lives by the quotation with which Dr. Magrath recurrently prefaced his notebooks: "The law has made you a witness. Remember that as a man of science you have no victim to avenge nor guilty or innocent persons to ruin or save. You must bear witness within the limits of science."

Apparently their lines of work never touched or crossed but each must have been conscious of what the other was doing. Each in his own locality set a permanent pattern. Had they met as opposing experts the irresistible force would have encountered the immobile body and nobody can guess what would have happened.

I come naturally by my interest in them. My father, was for many years called into Maine courts whenever poisoning was suspected or blood stains were found. I remember keenly the occasions when a deputy sheriff would deliver the entrails of a victim which until analysis were duly refrigerated in the ice chest in the basement of the science building; and I have a vivid recollection of watching him make the Marsh test for arsenic, show me the tell-tale results, and felicitate the prosecutors on the stupidity of the poisoner for using the easily obtained but also easily detectable lethal agent.

In the science building in a cabinet in the room where I had my printing press was a mustache cup bearing the inscription "Remember Me" which still bore the stain of the arsenic laced coffee which the wife of a Togus veteran had supplied him one morning for breakfast. "She remembers me all right," my father used to say.

DR. MAGRATH

Although Sir Bernard Spilsbury didn't come into my ken until I began to read collections of English murder trials I made the acquaintance of the famous Dr. Magrath when I was a prosecutor.

Three times he was the mainstay of a prosecution for which I was responsible. In one of these cases I sat on the steps of the mortuary at Lewiston while he took apart what was left of a young woman who had been thrown into the Androscoggin River by an abortionist many weeks before her sodden body was found. Another time I was with him at Yarmouth when he concluded that another young woman had not fallen downstairs to her death but had been socked on the head by what eventually turned out to be her own rolling pin in her husband's hand.

When I knew him Dr. Magrath was a burly, ruddy faced man in his early sixties, with a mane of hair which had been red but was then gray. He walked like a boat breasting the current, his shoulders back and his chest forward. He always wore a flowing Windsor tie and smoked a drop-curved pipe. He travelled in an antique coupe not unlike the "Wreck" in which Arthur Crookes travels to English villages to solve murder mysteries for Michael Gilbert. When off duty Dr. Magrath was a good deal of an exhibitionist, ebullient with pungent stories and uninhibited reminiscences. He became the astringent scientist as soon as he went to work in the mortuary. A bachelor, living at the St. Botolph Club in Boston, he hadn't an enemy in the world, though of course he encountered some professional jealousy. His cronies called him Jake but when on duty he was addressed respectfully as Dr. Magrath. Of great physical strength he was a distinguished amateur oarsman both in college and afterwards, and served both as president of the New England Amateur Rowing Association and as vice-president of the National Association of Amateur Oarsmen. Naturally he belonged to many professional organizations. He was also a distinguished musician. As an organist he helped to earn his way through college. His former secretary tells me that sometimes after performing an autopsy in the secluded back room of a funeral home he would go into the ornate funeral chapel and relax by playing the organ until the small hours of the morning to the puzzlement of belated passersby. As a singer he was an active member of the St. Cecilia Society, the Handel and Hayden Society and the Harvard Alumni Chorus. At the time he was stricken with a fatal embolism at the age of sixty-eight, he was dressing for a concert of the St. Cecilia Society in which he was to participate. His for-

* Fraternity Club Paper, December 8, 1958.

** Mr. Robinson, a graduate of Bowdoin College and Harvard Law School, has been in the practice of law successively in Boston, Portland and Brunswick for over fifty years. He was prosecuting attorney in Cumberland County for six years; subsequently attorney general of the State of Maine for four years after having served as deputy attorney general.

mer secretary tells me he was more interested in taking part in concerts than in listening to the performance of other musicians. Above all things he scorned people who attended the opera merely as a social function.

Nobody has written the life of Dr. Magrath. Some time somebody will. My original plan to devote this paper to him was frustrated by the paucity of available information. All that the casual seeker for facts can find out about him is in a thin folder in the Harvard University Library. His records of 25,000 cases are preserved in the library of legal medicine which bears his name at the Harvard Medical School and in the Suffolk County Medical Examiners office, but in neither place are accessible to the public. These records should be made available some day to some purposeful writer but of course it is quite proper that in the meantime they are carefully sequestered from casual curiosity seekers and particularly from anyone suspected of being a detective story writer. Plots which might embarrass living persons would be far too easy to come by.

Born on October 2, 1870 at Jackson, Michigan in an Episcopalian rectory, young Magrath after graduating successively from Roxbury Latin School and Harvard College got his M.D. at the Harvard Medical School in 1899. Having specialized in pathology during his medical school course, soon after his graduation he became associated with that department at the school. He retained this connection until his death forty years later. After several interim promotions, Dr. Magrath became a full professor and in 1932 was installed into the professorship of legal medicine bearing his name, the gift of a wealthy admirer of his work. Mrs. Frances G. Lee. One of the provisions of her gift was that the Magrath Library of Legal Medicine should be founded and that the records of his private cases should there be preserved. In 1937 he became professor emeritus and died after a brief illness on December 11, 1938.

Dr. Magrath's association with criminal work developed naturally. While temporarily assistant to the secretary of the board of health he was assigned the job of investigating adulterated sausages. Almost before he knew it he was called into homicide cases.

During the middle years of the 19th century the coroner system had become ineffective. Dr. Magrath detested coroners wherever he encountered them and once said that they "gathered like flies over a corpse." One of the local undertakers was often the coroner and got two jobs out of any violent death. In 1877 Massachusetts set up the system of medical examiners which Maine and many other states have copied. Suffolk County which comprises Boston was divided into a northern and a southern district and Dr. Francis A. Harris became the first medical examiner for the northern district. Dr. Magrath succeeded him in 1907 and by successive reappointments held the office for twenty-eight years until 1935, three years before his death.

Dr. Magrath was not popular during his first term in office. He was in his early thirties and the abruptness

with which he announced his scientific conclusions did not endear him to some of his elders, particularly when his correct findings jarred with their opinions. There was underground opposition to his reappointment which delayed it for a year after the expiration of his first seven-year term in 1914. The situation was a public mystery which was never wholly elucidated. Clippings preserved in the Harvard Library show that he was finally and publicly cleared of any reflections on his character of ability. The Boston newspapers carried editorials about the devious methods which had been used to discredit him. It was said cryptically that two former employees of the medical examiner's office were punished for conspiracy to damage his reputation. I am told that one charge against him was that his car had been parked all night in front of a widow's home. This charge flushed out when it was discovered that she was his sister.

It is a strange fact that the ambidexterity of Dr. Spilsbury, because of the loss of a right hand finger, was similar to the left hand skill which Dr. Magrath developed after an infection had caused two of his right hand fingers to stiffen. As a matter of fact, Dr. Magrath chose to go through seven weeks of illness rather than submit to have his right hand amputated. One of the newspaper clippings in the Harvard Library says that for those seven weeks "the world watched his fight for life."

Of Dr. Magrath's cases I can refer to but a few. Here in Maine he was well known in our courts. I have an idea that the doctor may have been connected many years ago with the trial of Stain and Cromwell who were accused of robbing a Pittsfield bank and murdering the cashier. I remember he told the story of the case and expressed his doubt of their guilt. You will remember that they were eventually exonerated and freed after many years in the state's prison.

I was associated with him in at least three cases; I have mentioned two of them.

One was the case of Williams who bludgeoned his pregnant wife at Yarmouth with a rolling pin. She was supposed to have fallen to her death from the landing of the shed stairs in a neighbor's house but Dr. W. E. Freeman of Yarmouth, who performed an immediate caesarean in the vain hope of saving her unborn child, refused as medical examiner to give a certificate of death by accident. The newspapers took up the case and Ralph Ingalls and I had Dr. Magrath meet us at Ralph's house, accompanied him to Yarmouth and Dr. Magrath found that death was due to blows on the head. No trial resulted from that case. Williams summoned as a witness and waiting his turn outside the grand jury room, confessed to Ralph during the noon hour. Williams was thrown into a funk by the succession of witnesses entering and leaving the room. He came before the grand jury at his own request that afternoon and told them the whole story. He was sentenced to state's prison on his own plea of guilty.

My second experience with Dr. Magrath was in the two trials of a Doctor for an unsuccessful abortion. The victim's body was disposed of by throwing it into the Androscoggin River where it spent the winter. Dr. Magrath was able definitely to determine that the cause of death was a botched surgical attempt to end the pregnancy.

The third case was in Aroostook. A farmer girl-of-all-work was accused of strangling her unwanted baby late in the fall and dropping it into the barn privy, just as jealous Constance Kent did a century ago with her young brother in one of England's most famous cases. The infant's remains discovered when the privy was cleaned out in the late spring were substantially intact. Dolph Crawford represented her as effectively as any of the famous criminal advocates in this country or England could have done. Dr. Magrath's testimony that the infant had been strangled blocked the traditional defense in such cases. When the unwanted infant has been smothered the desperate mother usually explains that it was an accident and that it was fright that led her to hide the body instead of reporting the case. Dolph brought out a defense to the effect that the infant had been taken to an unknown home by some mysterious Canadian friend and that the privy contents were too well preserved to have been deposited months prior to the discovery. Two Aroostook Medical examiners were of that opinion and Dr. Magrath's testimony regarding the process of decomposition did not convince the jury. In effect they said the baby was somebody else's but it wasn't up to them to say whose.

In New Hampshire Dr. Magrath figured in the case where a man murdered his wife before he left their cottage at Ossipee Lake one morning for Boston after laying a fuse which set the cottage on fire after his departure. Unfortunately for him the cellar was full of water and the iron bed and his wife fell safely into the pool.

In his home commonwealth I know that Dr. Magrath took an important part in the famous Sacco-Venzetti trial and was convinced of their guilt.

I suppose it is likely that he figured in the case of Clarence Richeson, the Cambridge clergyman who gave his pregnant paramour a poison tablet included in a pill box with some harmless sugar pills which she was to take so as to remove the difficulty, which was even more embarrassing to him than it was to her because he was about to be married to a wealthy young lady. This, as I remember it, was one of the few cases where a plea of guilty of murder has been accepted in a state which has capital punishment. This penalty was duly imposed on Richeson after he had vainly attempted to emasculate himself as a penance or for sympathy or for some other unknown reason.

Out of the usual run of his cases in Boston were forty-four autopsies which he performed on the passengers in a trolley car which went off a bridge in Boston on Election Day in 1916; and twenty on the victims of

the Arcadia Hotel fire. One of these hotel victims was a guest who was found sitting in his bedroom uninjured by the fire, dead, as Dr. Magrath found, from poison which he carried in a fountain pen.

During Dr. Magrath's thirty years of service he became the acknowledged leader of the medico-legal profession in the United States. Not only did he participate in thousands of investigations in his home county but was called on far and wide. He was always on the side of the prosecution because he felt that as a state's expert in Massachusetts he could not properly appear against the state elsewhere. There was some carping from time to time because his extended absences from his home jurisdiction increased temporarily the active burden of fellow medical examiners. But no serious complaint was made.

Dr. Magrath had a great fondness for Maine. His father had been a rector in Gardiner and the doctor had a summer place at Southport where he rusticated in rough clothes and a turtle-necked sweater.

So much for Dr. Magrath. I wish I could tell you more. He was unique.

SIR BERNARD SPILSBURY

Though little has been printed about Dr. Magrath there is plenty about Dr. Spilsbury. His name is familiar to every reader of the English murder trials of the first half of the 1900's. Mention of him is frequent in the reminiscences and biographies of distinguished English judges and trial lawyers of that period; Marshall Hall, Rufus Isaacs, Patrick Hastings and others. He bulks large in every book telling about Scotland Yard during those years. Detective story writers like Josephine Bell (who was a student of his) credit him with inspiring their writings as a famous Edinburg physician seems to have been for Conan Doyle the clue to Sherlock Holmes.

The story of his life and cases was comprehensively told five years after his death in a biography by Messrs. Browne and Tullett.¹ They made a study of his records of the 25,000 cases in which he had taken part. The index lists practically every English and Welch homicide trial during that period. But his biographers got no help from anything he wrote about himself. He kept no diaries and he never wrote the book for which he kept his records and for which he collected grim bits of memorabilia from many of his cases.

In Britain he used the same meticulous scientific methods as Dr. Magrath on this side of the ocean but his personality was very different. He was six feet two inches tall, spare in figure, clean-shaven, with grey eyes and a short nose. Sternly handsome he was always carefully dressed with a flower in his lapel. Dignified, self-contained, he could not bear to have anyone touch him. I have an idea that he must have resembled in appearance and manner Portland's Dr. Gerrish.

His physical equipment for his work was superb. In health he was robust with long sensitive fingers and

eyesight so keen that his optical conclusions were rarely disapproved by later microscopic examination. One of his assistants tells of Spilsbury's discovery with his naked eye of a tiny puncture in an internal organ nobody else at the mortuary table could discern but which the microscope verified. Abstemious in his tastes, he gave up cigarette smoking early in his life because he felt it affected his heart and sense of smell. I remember that my father said he was a non-smoker for the same reason.

Spilsbury enjoyed good food and wine when readily available but never exerted himself to get them. Day after day he lunched at a station restaurant with a book propped up in front of him. Special dishes brought to him by his loyal staff he ate unheedingly.

He was quite indifferent to money, tipped assisting employes lavishly, and lived almost wholly within the stipends he received from the Home Office and the hospital. Often he did not collect the absurdly low fees he charged for outside work. He was a bit imperious and resented contradiction. He gave the impression which his record came to justify that he was absolutely confident of his own observations and conclusions almost to the point of infallibility. Edward Lustgarten in venturing to doubt Spilsbury's conclusions in one case queried this infallibility. Peremptorily called to account by Spilsbury's biographers, Mr. Lustgarten took the opportunity later in a discussion of another case in his series of stories of famous trials to compliment Spilsbury on agreeing with the conclusions at which Lustgarten had later arrived. In that particular case Lustgarten explained that on the earlier occasion he wasn't questioning generally Spilsbury's almost superhuman accuracy but was merely expressing a cautious doubt as to one special item. Perhaps nothing better than this exchange of shots can evidence the pinnacle on which Spilsbury came to stand. He was acknowledged as the ideal scientific witness, testifying fairly and clearly on observations made after infinitely thorough examination.

Spilsbury had almost no lighter side. He had little interest in sports, his own athletic experience being confined to a mild participation in schoolboy games. He was no musician as Dr. Magrath was although he occasionally attended concerts of classical music and light operas. He was not much of a reader outside of professional books and journals. He ventured little into contemporary literature. He did read and reread Tennyson, Wordsworth and Kipling. Archaeology at one time interested him to some extent because of the anthropomorphic and detective aspects of the science. He belonged of course to many professional groups but socially although a member of several clubs he would hide himself in the library when he was not in the club dining room.

Though generally serious he was kindly and good-natured, always courteous and considerate but he was neither witty nor humorous. Adolescent jokes do seem to have appealed to him. Once he carried home part of

a human leg and left it in the kitchen under a dish cover. His family still has a thighbone tied with ribbons which he gave as a Christmas present to the family dog.

One respect in which he definitely differed from Dr. Magrath was in his aversion to exhibitionism and publicity. These aversions operated sometimes to give him the very publicity he scorned and even blanketed the truth.

In the Podmore case he identified a hair on a lethal hammer. He could have told the reporters that this had little bearing on the case unless the hammer could be traced to the victim. It wasn't. The reporters not being able to get the true bearing of the testimony reported it in such a way that the headlines said that "Two hairs may convict a murderer." Such sensationalism greatly annoyed him.

With this verbal picture before us of the man Spilsbury, let us now discuss his life and some of his cases.

Born in Leamington in January 1877 he was the son of James Spilsbury and came from a line of fairly prosperous Spilsbury ancestors, many of whom had been druggists and physicians. James himself wanted to be a doctor but a strong-minded mother persuaded him to follow business as a more profitable vocation. He prospered but never was satisfied, changing his business from one line to another and moving his family from city to city. When his son Bernard was born James was a wholesale druggist and manufacturing chemist. To this occupation he returned from time to time after spells as a consulting chemist. Sometimes he had an independent office and sometimes he was an employe of a manufacturer or merchandizer. The frustrated ambition of the father caused him to determine that his son should be a doctor and this result eventually happened although in the meantime Bernard's grandmother who had thwarted James, tried strenuously to thwart Bernard.

Young Spilsbury had a varied schooling because of his father's frequent changes of location. In the four years of his early teens he attended schools in three different places, finally in 1893 entering at Manchester, a junior college called Owen's College, and matriculating at Magdalen College at Oxford in 1895. He graduated with a BA degree in 1899 the same year when Dr. Magrath became a Doctor of Medicine. Spilsbury's many changes of school in his teens made him older than most of his classmates. He seems to have floated through his preliminary education without making any great impression on anyone except a few friends. He was so self-contained that he seemed almost stupid. He participated little in communal athletics but walked, skated and lived a fairly solitary life.

During this period of his life he met with an accident which deprived him of the index finger of his right hand and he acquired an ambidexterity which stood him in good stead in later life. He gave preference to his left hand but was able to use either. Some-

times when cutting into a corpse he wielded a knife in each hand at the same time.

After the attainment of his BA degree he fulfilled his father's hopes by being accepted for the medical school of St. Mary's Hospital in London. At the medical school he was regarded generally as a plodder. He went out neither for honors nor prizes and took five years to complete the three-year course, graduating and obtaining his degree in 1904.

The turning point in his life came during his medical school years through his association with three distinguished pathologists who taught at the school.

Spilsbury's rise to fame until he reached such eminence that Mr. Justice Darling called him the "incomparable witness" was due to his own preeminent ability but his rise was started, as is so often the case, by two added elements; the confidence in him held by loyal older friends who were in a position to give him an opportunity; and the opportunity itself.

These three older men who put him on the path to success were Drs. Luff, Pepper and Willcox all of whom were not only connected with St. Mary's but also with the criminal functions of the Home Office. These three men were the real founders of modern forensic medicine. While Spilsbury was at St. Mary's, Dr. Luff was approaching retirement but was still active during Spilsbury's student years; Dr. Willcox became dean of pathology while Spilsbury was in the school; and Dr. Pepper, perhaps the greatest of the three, was also in the pathology department. After the retirement in 1900 of Sir Thomas Stephenson who had long been the Home Office expert in homicide cases, Drs. Luff and Willcox had become joint toxicologists at the Home Office. On the retirement of Dr. Luff, Dr. Willcox, who was only five years older than Spilsbury and his lifelong friend, held the position alone for a decade until Dr. Spilsbury came into the picture. Dr. Pepper still retained the position of Home Office pathologist when the famous Crippen case broke although in 1908 he had retired as pathologist at St. Mary's and had been succeeded by Spilsbury. Spilsbury attracted Dr. Pepper's attention early in his medical course when he surreptitiously borrowed specimens from a post mortem exhibit for further study at home. At Dr. Pepper's suggestion he made a special study of scar tissue which stood him in good stead in the Crippen trial.

During his medical course Spilsbury was appointed by Dr. Pepper as student assistant demonstrator of pathology and three months after his admission to practice instead of going into general practice as he had planned to do, he became resident assistant pathologist under Pepper with a salary sufficient to modestly support himself and his wife. Pepper and Spilsbury were given the responsibility under a new set-up instigated by the London county council to conduct autopsies in sudden deaths which came within the territory covered by St. Mary's. Attendance at coroners' inquests was a part of the job and during the six years after his graduation

he got well acquainted both with autopsies and coroners although as yet he had been called into a trial court only very incidentally.

His interest in his chosen field was intensified by his election to the newly formed Medico-Legal Society of which Pepper was a founder and of which Spilsbury was to become one of the most distinguished members and officers. He also was invited to be an honorary member of a group of student biologists called *Wright's Circus* of which Alexander Fleming, the discoverer of penicillin, was a member. He also belonged for the rest of his life to "Our Club," a crime club organized during a social evening at Sir Henry Irving's with membership of judges, barristers, coroners, doctors, writers, actors and other people interested in crime. Dr. Priestley's well known Saturday evenings in a favorite series of detective stories are obviously based on "Our Club," which still exists.

Medical expert testimony was under a cloud in England for several decades after the trial in 1859 of one Dr. Smethurst for poisoning a young woman. In that case the expert for the Crown after testifying to the discovery of arsenic in the body had to admit defective methods and the other experts in the case disagreed with him and among themselves on matters of which the *British Medical Journal* said, "There could be no possibility of doubt." Most of the distinguished medical men of the day joined in a petition to have the sentence set aside. It was commuted to life imprisonment and trial judges as well as the public blamed the unreliability of expert testimony for the fiasco.

The rehabilitation of judicial and popular confidence in expert witnesses which was eventually to come largely as a result of Bernard Spilsbury's lifework was a slow process. It took nearly forty years.

Twenty years after the Smethurst case the suspicion of experts had so far softened that in 1879 legislation set the door ajar for them. Then as now the English system gave the police the responsibility of investigating crimes and prosecuting suspected criminals. In Metropolitan London this became the job of Scotland Yard, in the provinces the job of the local constabulary with the help if requested of Scotland Yard's Criminal Investigation Department. For cases in court, counsel for the Crown was obtained by the Treasury Counsel until early in the 1900's. The 1879 act created an office of criminal prosecutions to aid the police with expert advice. This office existed for five years with no real authority but the police began to use it in cases outside the normal day to day routine.

In 1908 a new law replaced the lapsed 1879 act with a more effective organization which exists today. A department of public prosecution under a director possessing real power maintains a staff of experts with laboratories at Scotland Yard which are unsurpassed in the world. The passage of this act was encouraged by the availability of Drs. Luff, Pepper and Willcox and their protege Dr. Spilsbury, whom they were grooming

to take over the principal place in the group of experts. A definite administrative department could now call on such men as these four and could furnish them with laboratories, equipment and official standing. Trial counsel under the new system are secured by the chief of the department in association with the attorney general, private practitioners may be briefed to represent the Crown, an assistant to the attorney general may be assigned to a case and on occasion the attorney general himself takes it on.

The English system is so different from ours that the casual reader of an English detective story is sometimes bewildered. Americans, familiar with the medical examiner system, are particularly puzzled at the functions of the English coroner. In Massachusetts and Maine the functions of the coroner have almost disappeared but in England he is still a very real official, and a competent aid in securing justice. I can testify to the efficiency of the coroner's inquest I attended in Shaftesbury last year when a young American bride had pitched to her death off her bicycle going down one of Shaftesbury's steep hills. The coroner was a white haired man of over eighty who had held the office for thirty years and he handled the case with dignity and dispatch.

It was for coroners' inquests that most of Spilsbury's autopsies were performed. The difference in the United States is that here the medical examiner is in effect both autopsist and coroner.

THE CRIPPEN CASE

Spilsbury came into fame with the Crippen case in 1910. This was his first important jury case.

In England the case is almost as well known as the Lizzie Borden case in the United States. In the Crippen case not only was the evidence grimly circumstantial as it was in the Lizzie Borden case but public attention was caught by the use of radio for the first time in a criminal case. Crippen and his paramour Ethel Le Neve who was dressed as a boy were apprehended in Canada, when disembarking from the steamer *Montrose*, as a result of wireless messages back and forth between land and sea.

Crippen was a quack doctor who after various shady experiences in the United States and Canada came to England with his much older wife Cora whose maiden name was unpronounceable. After her marriage she took minor parts in second rate musical shows under the stage name of Mabel Elmore. In London Crippen represented Munyon's Pills. You may remember "Dr. Munyon" squatting on posters and pointing his forefinger at you to tell you that his pills would cure all human ailments. My grandmother believed in these pills, perhaps yours did.

On the side Crippen engaged in various questionable enterprises. He was a dapper, mild little man, bald-headed with a straggly sandy mustache and wore gold bowed spectacles. He was like the little man who wasn't there. In any group of persons one would have found it hard to pick him out. Meek and apologetic,

he was under the thumb of his garrulous, vulgar wife.

In London the Crippens lived squalidly in a few rooms in a drab old house in Camden Town. The rest of the house was forlornly empty. Ethel Le Neve became Crippen's typist and they soon became overfriendly. On January 21, 1910, Mrs. Crippen disappeared after a late party in the kitchen of their apartment. Crippen jauntily said that she had returned to the United States. A day or two later Ethel went to live with Crippen and helped herself to Mrs. Crippen's jewelry and furs. Neighbors' suspicions were at first not taken very seriously by the police. Their rather cursory inspection of the premises revealed nothing but dirt and disorder; but the immediate disappearance of Crippen and Ethel needled the police into action and some disintegrated remains were found under the cellar floor.

At the trial of Crippen the identification of these remains was a vital point. The autopsy was assigned to the staff of St. Mary's with Dr. Pepper in charge and Spilsbury assisting. To him Dr. Pepper assigned the particular project of examining one small piece of tissue. This Spilsbury determined came from a woman's abdomen and bore the scar of an operation. Belle had had just such an operation.

After Dr. Pepper's testimony about the autopsy young Dr. Spilsbury was called to confirm Dr. Pepper's evidence. By the way he did it he made a deep impression. He stated with clarity his procedure and conclusions. On cross-examination the defendant's attorney implied that Spilsbury might have been influenced in his observations and opinion by his association with Dr. Pepper. This Spilsbury denied firmly and turning to Lord Chief Justice Alverstone who was trying the case said, "I have an independent position of my own and I'm responsible for my own opinion which has been formed on my own scientific knowledge and not in any way influenced by any supposed connection with Mr. Pepper.* * * I have absolutely no doubt in my own mind as regards this scar." He went on to say that he had his microscopic slides with him and would show and explain them to the jury if requested. His offer was accepted and in an adjoining room he demonstrated to the jury the abdominal source of the tissue and the existence of the scar.

The evidence of the toxicologists Drs. Luff and Willcox, that hyocin had been found in the remains plus evidence of a purchase of that chemical by Crippen and proof that a strip of cloth found with the body had been torn from pyjamas bought by him, completed the case for the Crown. The medical witnesses called for the defense testified sketchily and inconclusively.

The Crippen case established not only Dr. Spilsbury's reputation but finally reinstated the judicial approval of expert evidence in criminal cases which had been withheld for many years after the *Smethurst* case.

Dr. Spilsbury's cogent replies to the half dozen questions put to him; his refusal to be awed by the eminent counsel representing the accused or by the Lord Chief

Justice himself; and his illuminating demonstration of his microscopic findings made an impression which was heightened by his youthful good looks and confidence. He was only thirty-three but had the poise of a man twice his age.

In the fall of 1910 after the Crippen case was over Dr. Pepper retired and young Spilsbury was recommended by Pepper and Willcox to take over Dr. Pepper's work. As an expert he soon became greater than either of them. By the Home Office he was given the special title of "Honorary Pathologist" and for thirty-seven years was in a class by himself. But he and Willcox continued to work in complete harmony and in fact Willcox although five years older than Spilsbury outlived him.

Spilsbury's professional life during these thirty years falls into three periods. The first was from the end of the Crippen trial in 1910 to 1925. During those years he was busy day and night with autopsies and coroners' inquests and appeared in almost thirty capital cases including the classics of the period. These comprise a large proportion of the outstanding English murder cases during the last one hundred years.

Besides the Crippen case Spilsbury participated during this period of his life in seven cases each of which during its time absorbed the interest of the English press and public in the same way as the Parkman-Webster, Lizzie Borden, Harry Thaw and Lindburg cases held at various times the attention of the American people.

Spilsbury's testimony in these cases was crucial. It is well worth while to illustrate his methods by showing his part in these seven cases, Seddon, Smith, Voisin, Armstrong, Thompson and Bywater, Mahon and Thorne.

THE SEDDON CASE

The first of these was the case of Frederick Henry Seddon characterized by one writer as the type case of murder for profit.

I saw the Seddon case with all its ghastly lower middle-class background vividly dramatized with few modifications of fact in "Dead Secret" one of the most successful plays of last year's London season.

Seddon was a mild, affable little fellow, a successful insurance agent. Into his drab home he took as lodger a wealthy but exceedingly disagreeable old lady named Eliza Barney who died there in September 1911. Although she had bestowed all her considerable property on Seddon he had her cheaply and hastily buried in a pauper's grave and exacted a commission from the undertaker. After her death he was seen gloating over her hoarded gold pieces. Suspicion was aroused against him by disgruntled relatives of Eliza whom Seddon had delayed in notifying of the death and funeral.

This was the first of Spilsbury's many arsenic cases. Like my father he had an occupational satisfaction when arsenic was used by a poisoner. Easy to get, tasteless, delayed in action if administered in installments, pro-

ducing symptoms closely resembling natural illness, it holds an attraction for the poisoner. But it is a metallic poison, leaving permanent traces, easily detected and measured by the analyst, and its lethal effects are plain to the eye of the person performing the autopsy. Indeed Spilsbury is said to have been able to detect it by his sense of smell before the opening of a victim's coffin, and this in spite of the fact that the keen nose on which he relied in his early cases began to fail by middle life. His sniffing at a decayed corpse "as if it were a bouquet of flowers" someone once said, after an excursion outdoors to rest his nose was a characteristic feature of his autopsies. Sniffing smells that overpowered policemen on duty during an autopsy were to him valuable occupational methods.

In the Seddon case, on orders from the Home Office, Drs. Willcox and Spilsbury performed an autopsy on the exhumed body. The trial lasted ten days. Sir Rufus Isaacs prosecuted and Marshall Hall defended, two of the most distinguished barristers that England ever produced. Spilsbury's brief but cogent testimony to the effect that arsenic found in the remains must have caused her death, was indispensable to the prosecution's case. Edgar Lustgarten criticizes the weakness of the Crown's evidence in trying to connect Eliza's death with the purchase of some arsenic flypaper merely on the basis of an uncertain identification by the flypaper dealer of Seddon's daughter as the customer but nobody questions Spilsbury's testimony. His imperviousness to cross-examination was yet to become a legend. This time Marshall Hall tried it and retired defeated from the attempt.

Realizing that he could not escape from the testimony of arsenic in the body Marshall Hall suggested that she might have taken arsenic regularly as an internal cosmetic. Spilsbury's testimony ended that theory. He was as familiar as my father was with the red-bound book Blythe on Poisons. Among the points on which Spilsbury based his conclusion in the Seddon case was the high state of preservation of the exhumed body which he said indicated acute poisoning from a large amount of arsenic.

Seddon might have escaped conviction as his wife did had he not insisted over Marshall Hall's objection in taking the stand. His attitudinizing was obvious and his overweening conceit and selfishness gave the impression to the jury that his chief concern with the trial was that he should not be found to have been a fool. He seemed to be proud of his overwhelming meanness, and it was easy for the jury to see that the death of the old lady did not bother him.

Marshall Hall who had little hope for Seddon after Seddon had decided to take the stand, went through the motions of an appeal to the criminal court of appeals and criticized the expert testimony. The court found no errors in the trial and Mr. Justice Darling said that the expert testimony was "ample and conclusive."

THE BRIDES OF THE BATH

Dr. Spilsbury's next world famous case was the trial in 1915 of George Joseph Smith who was put on trial for murdering the first of three successive women whom he married and who had drowned in bathtubs when taking a weekend bath. Smith was one of the most repellent criminals who was ever put in a dock, — vulgar, illiterate, meanfaced but nevertheless he seems to have had a "way with him" with inexperienced women. He seems to have made his living for fifteen years in early manhood by getting into the good graces of lonesome and inexperienced females, obtaining their savings and then disappearing. Frequently he would obtain a marriage license and go through a form of marriage as a part of the procedure. He moved about from place to place, particularly haunting seashore resorts where it was easy for him to strike acquaintance with women to victimize. The trail of women he left behind him who might make trouble for him may have suggested to him that he ought to do a more thorough job and leave no loose ends.

Toward one helpmate, Edith Pegler, he seems to have had either a definite affection or perhaps merely a feeling of safety. He tried no violent games on her, but returned from time to time to her over the years living with her on his fraudulent gains for various lengths of time in various places. She knew nothing of his nefarious sources of income.

The case for which he was put on trial was the drowning of one Beatrice Mundy at Herne Bay on Saturday, July 13, 1913. It appeared that on July 9th Smith acquired on credit a cheap and simple portable bathtub for which he never paid, returning it a week later. On Saturday morning a doctor was summoned by note from Smith (then going under the name of Williams) to find the dead Beatrice submerged in a bathtub. A quick inquest was held of which her relatives were not notified, a verdict of death by drowning in an epileptic fit was returned and the case was closed.

On his illgotten gains Smith lived peacefully with Miss Pegler until October 1913 and then went to Southsea, entangled and on November 4th married Alice Burnham, a robust girl of twenty-five engaged in nursing and having a little money of her own. Insurance was taken out on her life and she duly made a will in her husband's favor. Rooming with a Mrs. Crossley who had a bathroom, on December 10th Smith called a doctor and had him prescribe for Alice's headache. The same pattern of marriage, will, insurance, lodginghouse with a bath and doctor's call that had been set up at Herne Bay now took place at Blackpool.

On the afternoon of Friday the 12th the landlady's daughter prepared Alice's bath for 8 o'clock. The new lodgers went upstairs together, Smith presently came down and sat down in the kitchen with the landlady. Water soon appeared on the kitchen ceiling, Smith went up and reported that his wife was dead in her bath. Again as before, a weekend was at hand, a quick inquest

was held and a funeral on Monday followed before relatives were notified; and that was that.

The third time he carried his pitcher to the well it broke. This time the victim was Margaret Lofty and the scene was Highgate where under the name of John Loyd and his wife, rooms were taken soon after they were married, had insured their lives in each other's favor and had made out mutual wills. Again the doctor was called to discuss nervous symptoms which her husband described, a bath was ordered and just after 7:30 in the evening the landlady ironing in the kitchen heard splashing in the bathroom and a few minutes afterward the harmonium in the sitting room boomed out with "Nearer My God To Thee," Smith being the pianist.

Smith must have thought he had made a success in three cases and the only apparent reason why he did not go on with more is that Alice Burnham's uncle and landlord Crossley were struck with the resemblance between the newspaper report of the Highgate affair and the experience at Blackpool. Put on the trail the police soon located the still earlier case at Herne Bay, identified Smith as the bereaved husband in each of three cases, put him on trial and he was duly convicted.

Marshall Hall again represented the defendant but realized that it was well nigh a hopeless case. No evidence was offered for the defense. Hall's address to the jury lacked the exhortation characteristic of him and the verdict of the jury was returned after twenty minutes. From a lawyer's point of view the trial was remarkable because the Crown in prosecuting for the first of three similar murders was allowed to introduce evidence of the latter two not to show inherent wickedness and general criminal intent but to show the pattern. After over one hundred witnesses had been called by the prosecution the pattern stood out beyond a doubt.

Spilsbury within the space of a few days had performed autopsies on three exhumed bodies at widely separated locations; Herne Bay, Blackpool and Finchley. His testimony confirmed the fact that all three deaths were from drowning which epileptic spells, fainting or influenza could not have contributed for which disorders the physicians had in each case been consulted just before the casualty. The three bathtubs were brought into court and placed at the end of the solicitor's table. Spilsbury's theory was that after the victim was in the bath her feet had been suddenly grabbed and her head pulled under. He eliminated the possibility of any other cause and testified that the result of sudden immersion of a living person might well be a severe shock and even loss of consciousness. This latter point was proved to the satisfaction of the jury by an experiment performed in their presence outside the courtroom. The feet of a nurse in bathing costume was grasped and her head pulled under the water. When hastily pulled out she had to be revived by artificial respiration. Spilsbury did not approve of this bizarre experiment and declined to be present.

Marshall Hall had learned his lesson in the Seddon case and made no attempt to break up Spilsbury by cross-examination.

THE VOISIN CASE

Spilsbury's next sensational case was the trial of Louis Voisin and Berthe Roche for the murder of a French-woman Emilienne Garrand on November 2, 1917. This was one of the many cases that have started from the discovery of butchered human remains. The torso of a young woman without head, hands or legs was found wrapped in butcher's cheesecloth in a public park on the morning after a bad air raid over London. Through a laundry mark the police located Voisin, a brawny butcher, and the Roche woman in Voisin's apartment which was somewhat bloodspattered. The situation was complicated by the fact that Emilienne's room, a short distance away, was also bloodspattered. Emilienne frightened by the air raid had slipped through the darkened streets for the company of Voisin who had been her particular friend, and found him entertaining Berthe. Apparently the two women mixed it up together. Berthe whacked Emilienne but not so effectually as if Berthe had been an experienced butcher. Emilienne lingered alive for half an hour and then the butcher finished the job Berthe had started, deftly cut up the remains, concealing the head and hands in various places and throwing the other oddments into a public park. He confused the issue by spattering animal blood around the victim's apartment.

Spilsbury's part in the case was to reconstruct the circumstances of the killing, fix the responsibility of the accused man and woman and locate the place of the crime. He identified the blood in Voisin's apartment as human; at Emilienne's it was not. At Voisin's apartment he demonstrated silently to the jury what his investigation showed must have happened. He was able to satisfy the jury in pantomime of the order of events and the part that each of the two actors played, based on his oral testimony in court as to the autopsy after his observation of the premises. Both were convicted.

THE ARMSTRONG CASE

Before Spilsbury participated in his next startling case he had transferred from St. Mary's to Bart's Hospital. This change caused a great sensation and the circumstances were for a long time obscure. We now know that a staff member at St. Mary's had curtly ordered Spilsbury to preserve a specimen which Spilsbury did not think was worth saving. The staff member had no real authority over Spilsbury but nevertheless he again peremptorily ordered him to carry out instructions. On the dignified refusal of Spilsbury the other man refused to retract or apologize. A hearing was called by the governors of the hospital which eventually exonerated Spilsbury. The staff member was ordered to apologize, did it with very bad grace and never spoke again to Spilsbury or the committee. Spils-

bury, however, did not wait for the verdict but resigned on November 18, 1920 and became lecturer on morbid anatomy at Bart's Hospital, retaining of course his connections with the Home Office.

During the year 1921 much publicity was given to the accusation that one Harold Greenwood, a Welch solicitor had poisoned his wife. Greenwood was found not guilty after a week's trial. Students of English murder cases have no doubt but that Herbert Armstrong, a solicitor located about fifty miles away on the English side of the Welch border, planned to do as well for himself as his fellow solicitor had done. Armstrong was the type of undersized egotistic fellow who figure in so many crimes. He was to all appearances a good citizen, prominent in lodge, church and community affairs and clerk of the local court. His wife was wealthy, overbearing and uninteresting. By all appearances they were a normal couple, the community did not suspect that he solaced himself with a lady friend in another town.

Armstrong seems to have decided that his wife was one too many and that he could safely follow the path which Harold Greenwood had taken. Herbert seems also to have felt toward solicitor Martin, his local rival, the same sort of feeling that lawyers not infrequently have occasion sometimes to feel toward brother practitioners, but Herbert seems to have thought that while he was about it he might as well get rid of his competitor. If he had contented himself by relieving his domestic pressure he might well have been successful as Greenwood was.

After his wife's return in January 1921 from a sojourn in a mental institution where she had recovered from what may well have been her husband's first effort at poisoning her, he bought some arsenic to kill dandelions with and she promptly died and was duly buried, the unsuspecting local physician certifying death from natural causes.

Months went by and then Greenwood's fellow solicitor Martin reported to the doctor that Armstrong had poisoned Martin's tea. It had been touch and go with Martin but he had survived. The doctor was at once alarmed not only for Martin but also over his snap judgment in Mrs. Armstrong's case and insisted that Scotland Yard must be called in.

Scotland Yard did not want to burn its fingers with another Greenwood case but could not ignore charges made by a reputable doctor and a solicitor of high professional standing. They instructed Martin to bait the trap for Armstrong pending further developments. For several weeks the two lawyers continued to practice law across the street from each other in apparent professional harmony although Martin managed to decline Armstrong's many requests to have lunch or tea with him except at the local bar or tearoom where Martin could watch his food.

Armstrong's suspicions were not aroused and a midnight exhumation of Mrs. Armstrong's body in January

1921 and removal by Spilsbury of various organs did not, as the saying "get around." Examination showed arsenic in the body and Armstrong who had been meanwhile detained for the attempted poisoning of Martin was indicted for the murder of Mrs. Armstrong.

The trial took place in the courtroom where Armstrong had been the clerk. As in the Smith case the testimony of the attempt to poison Martin was allowed as evidence of a pattern. The presiding justice recognized that this was a debatable ruling which the court of criminal appeal might reverse but that did not happen. Finding white arsenic among Armstrong's belongings was deadly evidence against him but the real issue was whether his somewhat neurotic wife could have taken the poison herself.

Here Spilsbury's expert testimony based on the evidence of the attending physician and nurse as to her condition during her last illness left no doubt but that she was physically helpless for a period prior to the time when the arsenic, according to Spilsbury's findings, must have been administered. Armstrong was convicted.

THOMPSON AND BYWATERS

In the year 1922 also occurred the trial of Edith Thompson and Frederick Bywaters. The case has been as much discussed and the result as generally discredited as Florence Maybrick's case of which Judge Chapman told the club some years ago. Bywaters was a young man who was not impervious to the infatuation for him which was felt by Mrs. Thompson. She was older than he, a very silly and sentimental woman not too happily married.

Bywaters fatally stabbed Mr. Thompson on a public street one evening shortly after he had left the theatre with his wife. There was no doubt of Bywaters' guilt, the whole question was whether Mrs. Thompson was the instigator of the crime. As was true of Seddon if she had kept off the stand she might have been freed but her silliness and her sentimental letters to Bywaters which he had retained, as has been the case with many other uncalculating individuals, caused her conviction. The Victorian mores had not yet disappeared and both judge and jury seemed to think that immorality in a wife made her responsible for anything that her lover may do.

Dr. Spilsbury's part in this case was not given the importance which it deserved. The purpose of his post mortem was to test for poison or powdered glass. He found none. This was negative testimony but might well have been used effectively by the defendant as a persuasive indication that Edith's letters to Bywaters luridly threatened death to her husband were fanciful attitudinizing. She wrote Bywaters that she had fed her husband powdered glass. Evidently she hadn't. By the same token the rest of her insinuations against him may well have had no basis in fact. To this argument if it had been made, the prosecution might well have answered that the issue was how the letters affected

Bywaters. Were they a cause for the attack on Mr. Thompson? The defendant on that argument would have been helped by the earnest assertions of Bywaters that Mrs. Thompson had nothing to do with his murderous act.

The prosecution would have been glad not to call Spilsbury but all the world knew that he had performed the autopsy and therefore he could not be discarded. The prosecution played him down and the defense missed their chance to turn his testimony to their favor.

Before his next famous case came to trial Dr. Spilsbury — or Mr. Spilsbury as like all English medical men he preferred to be called — became Sir Bernard Spilsbury. On the new year's honor list in 1922 King George V on the suggestion of the prime minister Bonar Law made Spilsbury a baronet.

PATRICK MAHON

In 1923 one Patrick Mahon like Armstrong, seems to have gotten his murderous idea from a previous case but like Armstrong he botched it. We shall see that Thorne's case which comes next in line was an almost successful attempt to improve even on Mahon. Spilsbury considered the Mahon case as his most interesting experience but his admirers generally rank the later Thorne case as his most distinguished effort.

Between Eastborne and Wallend on the south coast of England stretches the Crumbles, a melancholy piece of shingle more than two miles long with its greatest depth nearly a mile. It is bounded by the beach and the road and crossed by a stub railroad track to the shore which is used to collect sand for ballast. On the Crumbles were a few cottages and a disused coastguard station. In this bleak region in 1920 the body of a girl was found roughly buried and after some intensive detective work two men named Field and Gray were apprehended and convicted. Spilsbury was connected with that case only in an advisory capacity.

Two years later in 1924 Emily Kaye a competent, prim stenographer of thirty-four, became too fond of a handsome fellow employe who called himself Patrick Mahon. She disappeared. At that very time an unexplained absence from home caused Mahon's wife to suspect that he was playing the horses. She went through his pockets and found a parcel room check which a friend who was employed at the railroad station undertook to investigate. In a suitcase he found bloody garments and a saw. The police interrogated Patrick and most of the thoroughly dismembered body of Emily was found in and about a cottage in the Crumbles which had been hired by Patrick for a weekend with his purported wife, Emily. The remains had been boiled and dissected into fragments and the head was never found.

The case against Mahon was taken to court with little hope of success but was eventually proved beyond anybody's doubt largely on Sir Bernard's testimony.

He spent eight hours in the bungalow collecting the evidence. Among the few larger pieces was a portion

of chest and shoulder which showed a heavy blow inflicted before death. Putting together merely the fragments Spilsbury was able after twenty-four hours of continual labor to assemble a single human body which he was able to describe as that of an adult female of big build and fair hair, pregnant and healthy. He could not specify what had killed her but he could tell what hadn't. He could say that her death was not from natural causes but that was as far as he could go in his direct testimony. If Mahon had not taken the stand the case might not have gone beyond that point even though it was shown that Mahon had been previously in prison for robbery with violence; had purchased a knife and saw while Emily was still alive and had repeatedly lied; and while planning the visit to the Crumbles and again after the weekend he dallied away the time with one Ethel Duncan whom he had picked up shortly before he took Emily to the Crumbles. But his story on the stand convicted him. He said that in a scuffle she fell and hit her head fatally against a coal scuttle and that he cut her up to head off suspicion. Sir Bernard testified that the knife which Mahon claimed to have used could not possibly have done the job and that no fall against that scuttle could have caused fatal injuries. A blow which would have caused such an injury would have crumbled up the scuttle which was of thin cheap material.

Mahon's execution was signalized by his attempt to avoid the trap by jerking his bound feet forward toward the stationary part of the platform as the trap dropped. Whether he merely planned a delaying action or whether he had some idea that an unsuccessful execution could not be completed of course we don't know because he was killed by striking the base of his spine against the sharp edge of the platform. Sir Bernard was called to perform an autopsy on the criminal as he had already on the victim. This was one of a series of post mortems he made on executed persons in order to study immediate effects of a fatal blow.

NORMAN THORNE

The last of Spilsbury's startling cases was the trial of Norman Thorne for the murder of Elsie Cameron. In a situation much like Mahon's, Thorne would have escaped the penalty for murdering his Elsie but for Spilsbury's testimony. Thorne is known to have studied the newspaper reports of the Mahon case which occurred in the same county. Thorne disposed of his lady love just three months after the execution of Mahon. Thorne was a pious respectable young man with no criminal record and with only one of Mahon's evil propensities viz: overfondness for his girl friends. Fortunately that rather frequent propensity does not often result as tragically as it did with Mahon and Thorne. Mahon might never have settled down but Thorne notwithstanding his philandering and prevarications might have become in fact the respectable citizen which he appeared to be had he never met Elsie.

Thorne was a chicken farmer and to keep expenses

at a minimum lived in a shack surrounded by chicken runs down in the country. On his frequent visits to London he dangerously entangled Elsie's affections. She was not the commonplace matter-of-fact type of Emily Kaye but was a neurotic, emotional girl with the conventional middle-class belief that her condition caused by Thorne would honorably result in a wedding and normal married life. Thorne got very tired of his Elsie and put her off with evasions when with good reason she pestered him to marry her. Eventually she took a train from London, appeared at his shack toward nightfall with her overnight bag and never was seen alive again. She seems to have told him that she was going to stay right there until he married her. By this time Thorne was dating another young lady in the vicinity and after Elsie's arrival he left the shack to spend the night with the other woman returning to the shack next morning. He stayed at the shack until afternoon and then took the other girl to the movies. Search having been made far and wide for the missing Elsie with the eager help of Thorne who purported to be puzzled and distressed, the police eventually found three persons who could testify to seeing Elsie enter the shack, and a month after the disappearance her mangled remains were found in the chicken run under a spot where Thorne had posed for newspaper pictures as the bereaved fiance of the vanished girl.

Thorne now changed his story and said that neurotic Elsie threatened to commit suicide when he left her to make his date with the other girl. He said that this did not impress him particularly until he returned and found her hanging to a cross beam in the shack. Bewildered and frightened he cut her down and then up in order to remove suspicion against himself instead of calling in the police.

The real issue in the case was whether Elsie had died from blows or hanging. As soon as found the discovered remains were examined by Dr. Spilsbury with all his characteristic thoroughness and then reinterred. Another month later they were again inspected in Dr. Spilsbury's presence by one Robert Matthew Bronté and the trial that ensued really came to be a conflict of opinion between Spilsbury and Bronté. They were the only pathologists who could speak from their own observations. The defense had seven other doctors but of these the pathologists could only base their opinions on the observations testified to by Spilsbury and Bronté.

This man Bronté was now to become a thorn in Spilsbury's flesh. He was a flamboyant, talkative, slapdash Irishman who had got some training in Ireland and then had come to England. From this time on he appeared as an expert against Spilsbury in many cases — and almost invariably was discredited by the jury.

I remember a somewhat similar quack expert who was offered by the defense to contradict the explicit testimony of Captain Van Amberg of the Massachusetts State Police in the identification of fatal bullets with the accused's revolver. On the stand this cocky individ-

ual admitted blandly that he was an "expert" in some twenty different fields. Bronté seems to have been cut off the same piece. One respect in which he ruffled Spilsbury was by claiming to be a "home officer expert" on the basis of occasional official employment. Spilsbury so detested him that he could only refer to him as "that man."

In the Thorne case Spilsbury testified to a complete absence of any indication of a hanging and to definite indications of heavy blows before death. His opinion therefore was that the victim had been slugged and not hung. Bronté claimed to have observed indications of a rope around the throat which Spilsbury dismissed as natural folds in the skin. English judges have and use the power of commenting on the testimony and the charge to the jury praised Spilsbury and slanted against Thorne.

After the trial an effort was made to have the government chose a disinterested expert to audit the scientific testimony under a special clause in the Criminals Appeals Act which had never been used. The appeal judges ruled that this was unnecessary, they said that the testimony was clear and unanswered. In preparation for an appeal to the Home Secretary for leniency, propaganda appeared in favor of Thorne. Even the *Law Journal* criticized the result based on the medical testimony in the case; Conan Doyle who always sympathized with the underdog joined in the criticism and the newspapers took up the hue and cry.

It is probable that jealousy of Spilsbury had its part in all this but the Home Secretary seems to have felt that the jury was justified in believing the careful testimony of Spilsbury's observations rather than Bronté's story of his careless inspection a month later.

The smoke blown up by the controversy has obscured the vision of some subsequent writers. The preface to the volume of *British Trials* reporting on this case is almost a special pleading for Thorne and it was in his notable report on this case that Edgar Lustgarten suggested that Spilsbury was not infallible and that it was a case of one expert witness for the prosecution outweighing eight for the defense.

Spilsbury's biographers point out that no mere count of witnesses should decide questions of law or fact. The issue is not Spilsbury's general infallibility but whether he was right in this particular case. Only one expert on each side had ever inspected the corpse and the jury believed the one who saw it first. Subsequently, as we have seen, Lustgarten changed his stance.

1925-1940

The years 1925-1940 comprised the second and greatest period of Spilsbury's activity. The cloud which drifted in from the Thorne case was soon dispelled and his position was firmly established as the supreme expert in England and perhaps in the world. During this period in addition to thousands of autopsies leading at

most to inquests, he participated in one hundred and thirty murder investigations. Few of these are classics but summarizing in ten classifications notable cases in which he participated during this period takes ten chapters and almost two hundred pages out of the five hundred pages of Browne and Tullett's biography.

It was during this period in 1926 that Spilsbury made successfully one of his few appearances for the defendant. This was in Scotland where a verdict not proven was brought in at the trial of John Donald Merrett for shooting his mother. This case William Roughead wrote up inimitably under the title "Malice Domestic." Mr. Roughead congratulates the defense for having been able to secure Dr. Spilsbury—"an expert * * * of European fame, of the highest eminence in his profession * * * and of unfailing fairness." The crux of the case was the question of powder blacking. Spilsbury participated with a gun expert in experiments with the fatal gun and its cartridges. His opinion based on the course of the bullet and the amount of blackening conceded the possibility of suicide and that was all that was needed for the result secured. In his reminiscences the presiding justice of the Merrett case speaking in the highest terms of Spilsbury's testimony refers also to the Scotch trial of one Peter Queen at which he had presided in 1932 in which Spilsbury appeared unsuccessfully for the defense who claimed that a strangled young lady had committed suicide.

The only other case to be commented on during this prolific period of Spilsbury's life is the case against Elvira Barney in 1932 for the slaying of her paramour. Elvira was the black sheep of a wealthy and titled family, grass widow of an American who had returned home after a brief interlude with her. She was attractive in the then fashionable style — large gray eyes, snub nose, blonde fluffy hair, flat boyish figure with tremendous animal energy and considerable natural intelligence. She lived hectically in a remodeled mews with a playboy whom everybody called Michael but whose real name was William Stephen. There late at night after an evening which began with an uproarious party at the mews and was followed by making the rounds of the gay resorts and a return to the mews, Michael was shot. Elvira's trial was the society sensation of the decade.

Luckily for her, she was defended by Sir Patrick Hastings who was at the top of the profession in litigation arising from society high life. He put to use in this criminal trial the experience acquired in many society controversies.

Sir Bernard Spilsbury testified for the Crown but the jury freed Elvira. Sir Patrick's procedure when Spilsbury was called was unusual. He testified with his invariably meticulous care regarding the condition of the body and pretty well eliminated the possibility of suicide which the spectators supposed was to be the defense. Accident was to be the real defense the prosecution knew, but they asked no questions about accident and on cross-examination Sir Patrick asked Spilsbury one or

two formal questions and let him go. The spectators were astounded.

The explanation is given with gusto by Sir Patrick in his reminiscences. He feared Sir Bernard's testimony. He recognized that Sir Bernard was fair and explicit but had a horror of infallibility, answering questions put but never volunteering testimony. Customarily Sir Bernard sat in court during the trial and would then give his opinion based on the testimony that he had heard. He would testify that the defense to which he had listened was inconsistent with his examination. Often this opinion by Spilsbury was fatal to the defendant's case. If the defense fell into the trap of asking him the basis of his opinion he would put the prosecution's case so eloquently that there was nothing left for the defense to do except talk. On the other hand if Spilsbury's statement was left unquestioned the jury simply believed it and that was that. Sir Patrick knew all this and spent much anxious thought in finding the best method to avoid the danger of having to meet or explain away adverse testimony of Spilsbury in this case. He asked the court to exclude Sir Spilsbury during the opening of the case and the calling of the preliminary evidence. This unprecedented request was granted. In his testimony Spilsbury said nothing which would discredit the defense of accident because he had no idea that accident was to be the defense and no questions about accident were asked him. Whether or not the Crown expected that Spilsbury's testimony on this point would be brought out effectively in answers to Sir Patrick's cross-examination we don't know for Sir Patrick by dismissing the witness after four uncontroversial questions closed that possibility. There was no testimony for Sir Patrick to explain away when he argued successfully to the jury that it was a case of accident.

1940-1947

Sir Bernard Spilsbury lived the last seven years of his life in an atmosphere of depression. The war hit him hard. His son Peter who gave promise of distinguished success was killed in September 1940 by a bomb dropping on the hospital where he was an interne. In March 1941 Sir Bernard's residence was bombed out and he had to go to live a lonely life in a private hotel up a steep hill in one of the suburbs. His wife left London for the duration of the war. As far as I know however, there was no estrangement. His eldest son Alan, whose health had begun to flag before the war began, had gained sufficient strength so that he could be of great help and assistant to his father in a clerical

capacity, died suddenly in November 1945 from galloping consumption and Sir Bernard's favorite sister died in March 1942.

Moreover Sir Bernard's own health had begun to flag even before the war began. He had a stroke in 1940 from which he measurably recovered but it was followed by two more in 1945. His straight erect figure bent from arthritis, which he insisted on calling lumbago. He found the burden of traveling any distance from London too heavy to endure. The war bore heavily on his spirits and on his regular habits of life. His work slowed up and he found that it took him much longer to complete an autopsy than in his earlier years. Occasional lapses in skill startled him. In one case he failed to locate a bullet which was loose in a skull.

His waning powers during those seven years could not but be perceived by his associates in spite of their efforts to blind themselves to it and he must have been aware of his own slackening condition although everyone cooperated in making no comments to him and in freeing him from every possible detail.

He was a man of the highest principles, scornful of chicanery, meanness and hypocrisy and a devotee of truth. And yet I have to say that he was essentially a realist and seems to have had no spiritual or religious resources to fall back on.

His last murder case was in April 1947 and no failing of powers was evident, but a little later in the year when his supply of record cards got low instead of renewing the supply by 500 cards, as was his usual custom, he ordered only 100.

On December 17th of that year he completed an autopsy, prepared his report to the coroner, destroyed his private papers, wrote a final farewell to a friend in Italy and remained in his laboratory after the usual evening hour. Later in the evening he was found there dead.

The autopsy report to Coroner Purchase with whom Sir Bernard had been closely associated over the years and whose foreword precedes the Browne-Tullett biography, gave coronary embolism as the primary cause of death with carbon monoxide poisoning as secondary cause. It was a sad ending to a distinguished life.

I can conclude my paper no better than by quoting the final words of his biographers: "Truth was what he cared most about; and if he had spent a whole life in general practice in the country as was once his ambition, he would have been just as great a man."

222 Maine Street
Brunswick, Maine

The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

\$79.2 Million In Surplus Allotted In 1st Quarter

The Department of Health, Education and Welfare, in the first calendar quarter of 1959, distributed \$79,216,133 worth of federal surplus property among the states, Hawaii, D.C. and possessions. All was made available for public health, educational and civil defense purposes. Personal property, comprising thousands of items, accounted for \$73,369,750 and the remaining \$5,846,383 was in real property.

The five largest recipients were California, \$7,741,265; New York, \$6,249,776; Texas, \$5,691,366; Georgia, \$4,789,395 and Alabama, \$3,573,629.

Report Sheds Light On Medicine As Practiced In USSR

Interesting and informative impressions of Soviet doctors and Soviet medical practice are contained in a report just published by the U. S. Public Health Service. In text, tables and illustrations it reviews the medical mission to the USSR which was taken late in 1957 by a group of five American physicians, none clinicians. Their leader was Dr. Thomas Parran, former Surgeon General of USPHS. Some excerpts from the 67-page report follow:

"Physicians in the Soviet Union have a special status. There is a former medical hierarchy, and governmental rewards in status and salary provide strong incentives for physicians to undertake advanced training. On graduation a physician earns 750 rubles (about 75 dollars) a month."

"In all, there are about 325,000 physicians, of whom

approximately three-fourths are women, a more than fourfold increase since 1925 and a ratio of one physician to 613 persons."

"The 1956-60 'norms' call for training more than 16,000 physicians per year, as well as 300,000 auxiliary personnel and the development of facilities to accommodate 340,000 hospital beds and 312,000 beds in creches (nurseries)."

"There is essentially no freedom of choice of physician by patients in the Soviet Union, and the physician has limited mobility as to choice of location. Until 1955 physicians were required to serve a minimum of three years in the location to which they were assigned."

Among the mission's conclusions and findings: Under the system of state medicine, services are plentiful and without direct payment therefore but quality is not on a par with that in the U. S. . . . abortions range from 30 to 85 per cent of live births . . . hospital facilities are quantitatively sufficient but poorly planned and maintained

IRS Yields In Matter Of MD-Prescribed Elevators

The Internal Revenue Service won't appeal from a judicial decision that a medically-prescribed elevator in a residence is deductible. The U. S. District Court for Western District of Oklahoma has held that an elevator built in the home of a woman suffering acute coronary insufficiency may be charged as a medical expense. In this instance, the cost was \$4,400. A physician advised its installation.

Henceforth, says IRS, expenditures made for medical reasons will *not* be disallowed merely because they are of a capital nature. Then the bureau goes on to belaud the issue somewhat by creating a loophole for itself, to wit, that such expenditures will *not* be allowed medical deductibility if the resulting product tends to raise value of the property.

Data Gathered On Blue Shield Income Ceilings

A newly issued report by Social Security Administration deals with income ceilings of Blue Shield plans at the end of 1958. Fifteen of the 66 plans studied pay cash indemnity benefits regardless of the size of the beneficiary's income: Alabama, Arkansas, Delaware, Atlanta, Alton, Rockford and Chicago in Illinois, Louisville, Indiana, Mississippi, St. Louis, New Hampshire-Vermont, Oklahoma, Texas and Columbus, Ohio.

For single persons, income ceilings range from \$1,500 in Colorado to \$7,200 in Washington state and for families from \$2,400 in Colorado to \$7,500 in New Jersey and \$7,800 in Hawaii.

OASDI Coverage Of Doctors

The fourth House bill calling for inclusion of physicians for social security coverage was introduced last week. Author is Rep. George M. Wallhauser (R., N. J.). His H.R. 7294 gives an option to doctors engaged in practice at time bill is signed into law. They could come in or stay out at their pleasure. Participation would be compulsory for physicians embarking on private practice subsequently.

Sickness In Pregnancy Gets A Tax Definition

Internal Revenue Service has defined what sickness is when it strikes a pregnant wage earner, such definition to determine whether sums received constitute sick pay and are thus excludable from income. Absence from work in time of pregnancy is *not* sickness per se, IRS reaffirms. For tax purposes, it was held that "sickness" begins with onset of labor and ends when the woman's physical incapacity as result of childbirth or miscarriage is terminated.

Otherwise, it is required that a physician certify that the pregnant woman's absence from work is precautionary against miscarriage, in order to gain exclusion of wages from gross income.

Loans For Health Plans

Long-term, low-interest federal loans as an incentive to voluntary, nonprofit associations to construct and equip facilities offering prepaid health services are authorized by S. 2009. Its sponsor, as in past years, is Senator H. H. Humphrey (D., Minn.). Note: He addressed the ninth annual Group Health Institute held

the last week in May in New York under auspices of Group Health Federation, American Labor Health Association and Health Insurance Plan of Greater New York.

Books Issued On Patient Care

Just published by the Public Health Service is "Elements of Progressive Patient Care," an 87-page manual for guidance of hospitals planning to introduce the innovation of their wards. Recommendations are based largely on two years of study at Manchester (Conn.) Memorial Hospital. Single copies are obtainable on request to Division of Hospital and Medical Facilities, USPHS, Washington 25, D.C.

Veterans' Medical Care

Veterans Administration is resolutely holding out against overtures by AMA that it deal with one intermediary, on a uniform fee schedule basis, in contracting for "home town" medical care outpatient services.

Parcel Post Prescriptions

One of the shortest bills now pending in Congress is a one-sentence affair designed to reduce postal costs on drug prescriptions. It says: "In addition to the marks and enclosures permissible with respect to third- and fourth-class mail matter, written or printed instructions for the use of medical prescriptions may be enclosed with such prescriptions transmitted in the mails as third- or fourth-class mail matter."

Poison Control Center

Dartmouth Medical School now operates a Poison Control Center twenty-four hours a day, seven days a week. A short film on the Center and its use is in the process of being completed and will be available for county medical societies in the fall.

Snake Bite Dangers, Treatment Outlined

Victims of poisonous snake bites may increase in number and geographical distribution as camping and outdoor activities increase in popularity, two Philadelphia physicians warned today.

Most cases of snake bite occur in the southern and southwestern states where there are more snakes and the conditions favor greater exposure. However, poisonous snakes are found in all states except Maine and Alaska.

Writing in the May 16 Journal of the American Medical Association, Drs. Thomas McCreary and Harold Wurzel told physicians that they must all be prepared to treat poisonous snake bites.

Estimates of the incidence of snake bite in this coun-

Continued on page 246



EUGENE E. O'DONNELL, M.D.

Portland

President, Maine Medical Association

1958 - 1959

Eugene E. O'Donnell, M. D.

President, Maine Medical Association

1958-1959

Eugene E. O'Donnell, M.D., of Portland, has served as President of the Maine Medical Association since the close of the 105th annual session on June 24, 1958. A successful term will come to a close on June 23, 1959.

Dr. O'Donnell has long been active in medical circles, having served as Secretary and President of the Cumberland County Medical Society, as a member of the Council of the Maine Medical Association for three years — one year as Chairman, and as a member of several of the Association's Committees. Dr. O'Donnell has practiced in Portland since 1924 and is Chief of Staff at the Mercy Hospital and a member of the staff of the Maine Medical Center.

He was born in Lubec, Maine on July 29, 1898, the son of Edward E. and Mary R. S. O'Donnell. He attended Bates College and Bowdoin College and received his medical degree from the Yale University School of Medicine in 1923. He interned at the Maine General Hospital, Portland, Maine and at the New Haven Hospital, Connecticut.

Dr. and Mrs. O'Donnell, the former Annie T. Topolosky of New Haven, Connecticut, have two daughters, Elizabeth and Joan, and one grandson.



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

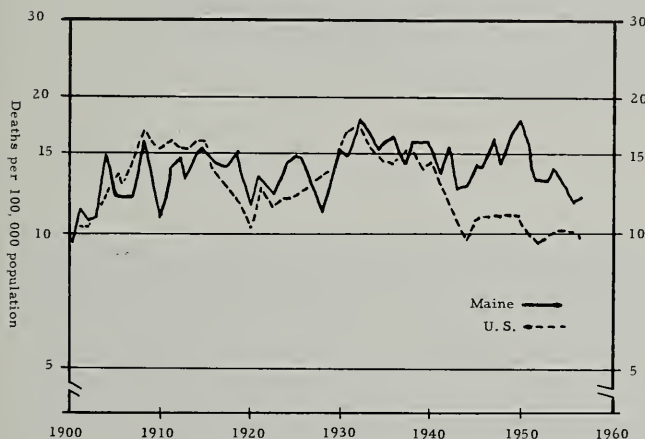
Suicide—Demographic Aspects Of The Problem

EDSON K. LABRACK, M.P.H.*

In 1957 there were 113 suicides in Maine and the suicide rate was 12.0 per 100,000 population. Suicide ranked 9th among leading causes of death for residents of the State during that year. Suicide first made an appearance among the 10 leading causes of death in Maine in 1954. Since that time Maine has been one among about 20 states in the U. S. where suicide is one of the 10 leading causes of death.

CHART 1.

SUICIDE RATES 1900-1957
MAINE AND U.S.



TREND IN THE SUICIDE RATE

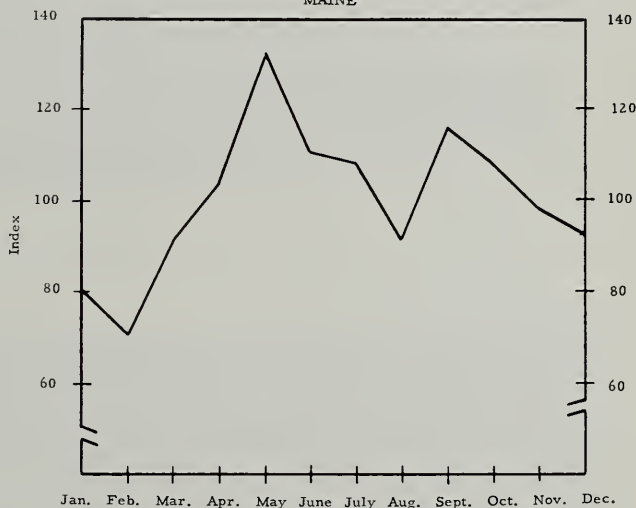
Chart 1 shows the suicide rate in Maine and in the U. S. between 1900 and 1957. The U. S. suicide rate shows a pronounced cyclical pattern with two complete cycles visible on the chart. The U. S. suicide rate appears to rise during times of economic stress and to decline during times of war. The U. S. suicide rate has remained relatively low during the past 15 years or so.

The trend in the Maine suicide rate is more difficult to analyze. The Maine suicide rate does not appear to

show the distinct cycle that the U. S. rate shows. It is apparent, however, that the suicide rate in Maine has been higher than the suicide rate in the remainder of the U. S. since about 1915 and that it has been significantly higher since the early 1940's.

CHART 2.

ESTIMATED TYPICAL SEASONAL INCIDENCE OF SUICIDES
MAINE



SEASONAL PATTERN OF SUICIDES

Chart 2 shows the estimated typical seasonal pattern of the incidence of suicides in Maine. The suicide rate is at its lowest during the winter. During the spring suicides increase rather sharply to an annual peak during the month of May. Suicides decline during the summer, but rise to a secondary peak during the month of September.

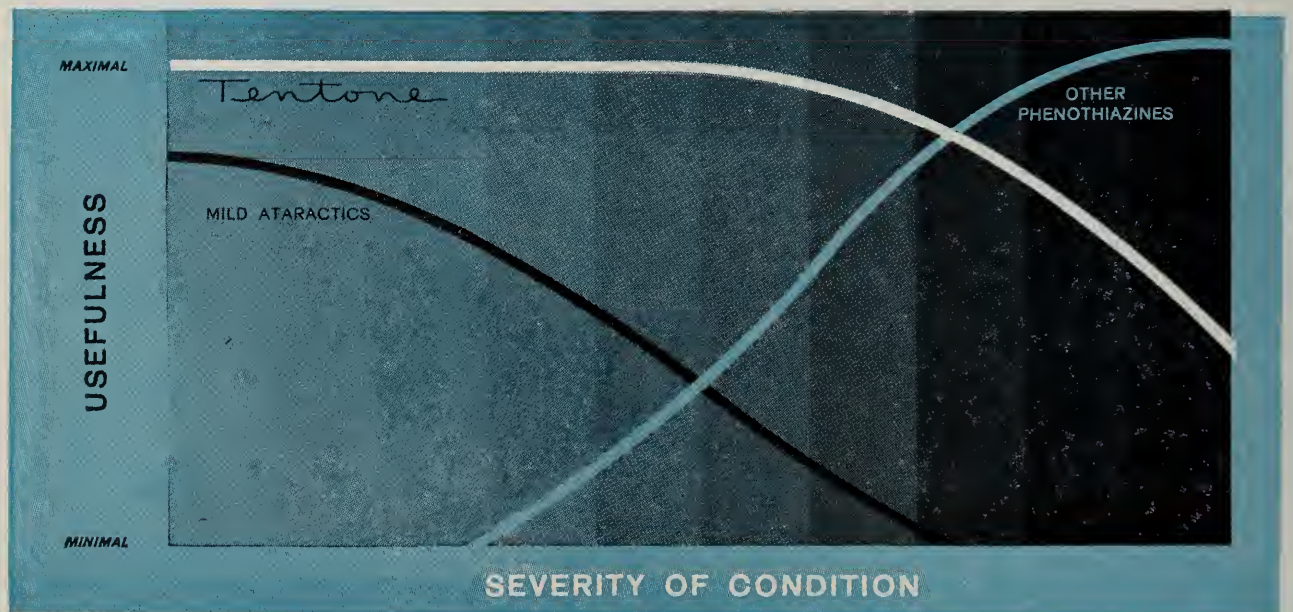
SEX DIFFERENCES IN SUICIDES

There are 4 to 5 times as many suicides among men as among women in Maine. In 1957 the estimated suicide rate was 20.0 per 100,000 population for men

*Director, Division of Vital Statistics.

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and 4.3 per 100,000 for women. Suicide ranked as the 8th most important cause of death for men and the 15th most important cause of death for women.

There appear also to be sex differences in the manner in which suicidal injury is inflicted. The following table shows suicide rates per 100,000 population in Maine in 1957 by manner of injury:

<i>Manner of Injury</i>	<i>Suicide Rates</i>	
	<i>Males</i>	<i>Females</i>
Total	20.0	4.3
Poisoning	5.4	1.5
Hanging and Strangulation ..	3.9	1.1
Firearms and Explosives	11.3	1.1
Other	2.2	1.2

AGE DIFFERENCES IN SUICIDES

The suicide rate increases with increasing age. Suicide, however, ranks higher on the list of leading causes of death in younger persons than it does in older persons. Suicide was the 4th most frequent cause of death

in persons 15-44 years of age, the 7th most frequent cause of death in persons 45-64 years of age, and the 14th most frequent cause of death in persons 65 years of age or over in Maine in 1957. The following table shows age specific suicide rates per 100,000 population in Maine and in the U. S. in 1956:

<i>Age in Years</i>	<i>Suicide Rates</i>	
	<i>Maine</i>	<i>U.S.</i>
5-14	0.1	0.2
15-44	8.8	8.2
45-64	21.9	20.2
65 and over	34.7	26.8

CONCLUSION

Suicide is an important health problem in Maine, ranking 9th among the leading causes of death in the State in 1957. The suicide rate is higher in Maine than in the U. S. as a whole. There are certain seasonal, sex, and age patterns which may indicate that further study of the problem might be useful.

Awards For Best Journal Articles

published during 1958-59

will be presented at the

General Assembly, Monday, June 22 at 4:00 P.M.

Program . . .

106th Annual Session Maine Medical Association

Sunday - Monday - Tuesday

JUNE 21, 22, 23 — 1959

The Samoset, Rockland, Maine

Program Arranged by the Scientific Committee

RICHARD H. DENNIS, M.D., Waterville, *Chairman*

DANIEL R. SHIELDS, M.D., Lewiston

JOHN A. WOODCOCK, M.D., Bangor

Information

Registration:

Registration Headquarters throughout the session will be in the Lobby at The Samoset Hotel.

Sunday, June 21 — 9:00 A.M. to 5:30 P.M.

Monday, June 22 — 8:00 A.M. to 5:30 P.M.

Tuesday, June 23 — 8:00 A.M. to 5:30 P.M.

Visiting Delegates:

Introduction of Visiting Delegates will take place at the General Assembly, Monday afternoon, June 22 at 4:00 P.M.

Scientific Exhibits:

Scientific exhibits will be located in the Ballroom.

Technical Exhibits:

The technical exhibits form an integral part of the educational program of this convention. Show your appreciation to these organizations, which help make our meetings possible, by visiting all of the exhibits. A list of the exhibiting companies is published in this issue of the Journal.

Door Prize:

A door prize will be presented at the Clam Bake on Tuesday, June 23. Don't fail to get your ticket at the Association's Registration desk.

Sunday, June 21

10:00 A.M. First Meeting of the House of Delegates

12:30 P.M. Luncheon

3:30 P.M. Second Meeting of the House of Delegates

6:30 P.M. Dinner

Speaker: **William B. Walsh, M.D.**, President, Project Hope, The People-to-People Health Foundation, Washington, D.C.

Project Hope — A Pathway Toward International Peace

Monday, June 22

Scientific Session

10:00 A.M. to 12:00 NOON. Presiding, **Richard H. Dennis, M.D.**, Waterville, Maine

Early Diagnosis of Brain Tumor

William J. German, M.D., Chief of Department of Neurosurgery, Yale University School of Medicine, New Haven, Connecticut

Medical Problems of Nuclear Submarines

LCDR Richard Arnest, MC USN, Medical Officer, U.S.S. Skate

12:00 NOON. Visit the Scientific and Technical Exhibits

12:30 P.M. Luncheon

Scientific Session

Sponsored by the Maine Chapter of the American College of Surgeons

2:00 P.M. to 4:00 P.M. Presiding, **Daniel R. Shields, M.D.**, Lewiston, Maine

Problems of Pediatric Surgery

Robert E. Gross, M.D., Surgeon-in-Chief, Children's Medical Center, Boston, Massachusetts

General Assembly

4:00 P.M. Presiding, **Eugene E. O'Donnell, M.D.**, President

Introduction of Out-of-State Delegates

Election of President-Elect

Presentation of awards for best Journal articles published during 1958-1959

4:30 P.M. Visit the Scientific and Technical Exhibits

5:30 P.M. Cocktail Party — Sponsored by Brunswick Publishing Company, Brunswick, Maine

6:30 P.M. Annual Banquet

Presentation of pins to Honorary members

Speaker: **Paul K. Niven, Jr.**, Columbia Broadcasting System Foreign News Correspondent recently expelled from Russia

Soviet Russia, A Purposeful Society

Tuesday, June 23

Scientific Session

9:30 A.M. to 12:00 NOON. Presiding, **John A. Woodcock, M.D.**, Bangor, Maine

Clinical Uses of Hypnosis in Modern Medicine

Milton H. Erickson, M.D., Phoenix, Arizona, President, American Society of Clinical Hypnosis

12:00 NOON. Visit the Scientific and Technical Exhibits

12:30 P.M. Luncheon

Scientific Session

Sponsored by the Maine Medico-Legal Society

2:00 P.M. to 4:00 P.M.

Remarks by President, **Philip O. Gregory, M.D.**, Boothbay Harbor, Maine

Introduction of guests

Alcohol and the Human Body

Leon A. Greenberg, Ph.D., Director of the Laboratory of Applied Biodynamics and Yale Center of Alcohol Studies, New Haven, Connecticut

State's Rights and National Security

Louis C. Wyman, Attorney General of the State of New Hampshire, Concord, New Hampshire

6:30 P.M. Clam Bake

Presentation of golf prizes and door prize

Speciality Group Meetings

Tuesday, June 23

10:00 A.M. Maine Medico-Legal Society — Business Meeting

Reports of Officers — Election of Officers — Recommendations of Executive Committee

2:00 P.M. to 4:00 P.M.

Maine Society of Clinical Hypnosis
Presiding: Donald Coulton, M.D., Bangor, Maine

Hypnotherapy

Milton H. Erickson, M.D., Phoenix, Arizona, President, American Society of Clinical Hypnosis

M.M.A. Committee On Alcoholism
Presiding: Gilmore W. Soule, M.D., Rockland, Maine

Current Status of the Treatment of Alcoholism

Martha Brunner-Orne, M.D., Boston, Massachusetts, Medical Director of Westwood Lodge, Westwood, Massachusetts, Chief Psychiatrist and Director of the In and Outpatient Re-education Units for Alcoholics, New England Hospital

Maine Eye Group
Presiding: Saul R. Polisner, M.D., Portland, Maine

Stereo Photographs of the Normal and Diseased Angle and Anterior Segment

David D. Donaldson, M.D., Boston, Massachusetts, Massachusetts Eye and Ear Infirmary

Maine Society of Anesthesiology
Presiding: Howard P. Sawyer, Jr., M.D., Portland, Maine

The Late Sequelae of Saddle Block Anesthesia In Obstetrics

Eva F. Dodge, M.D., Little Rock, Arkansas, Associate Professor, Department of Obstetrics and Gynecology,

University of Arkansas Medical School
Maine Society of Obstetrics and Gynecology

Presiding: Theodore M. Stevens, M.D., Portland, Maine

Control of Uterine Contractility

Charles H. Hendricks, M.D., Cleveland, Ohio

Maine Society of Internal Medicine
Annual Meeting — Election of Officers
Presiding: Albert Aranson, M.D., Portland, Maine

Maine Radiological Society
Annual Business Meeting
Presiding: Irving L. Selvage, Jr., M.D., Portland, Maine

M.M.A. Committee on Hospital Infections

Business Meeting

Presiding: George F. Sager, M.D., Portland, Maine

Special Notices

Luncheon Meetings

Sunday, June 21, 12:30 P.M.

Editorial Board

Monday, June 22, 12:30 P.M.

Amy W. Pinkham Fund Committee

Tuesday, June 23, 12:30 P.M.

Maine Chapter Academy of General Practice
Maine Society of Obstetrics and Gynecology

Election of Councilors

Election of Councilors for the following districts will take place at the Second Meeting of the House of Delegates on Sunday, June 21 at 3:30 P.M.

Third District — Knox and Lincoln-Sagadahoc Counties

Fourth District — Kennebec, Somerset and Waldo Counties

In accordance with the By-Laws, "Nominations for members of the Council for any District where there is a vacancy shall be made by a caucus of the members of the House of Delegates in that District. Each candidate for Councilor must be a resident of the District for which he is nominated."

Election of President-Elect

The election of a President-Elect will take place at the General Assembly, Monday, June 22 at 4:00 P.M.

Golf Tournament

Chairman, Francis A. Winchenbach, M.D., Bath, Maine.

Program for the Ladies

A social program, being arranged by the mem-

bers of the Woman's Auxiliary to the Knox County Medical Association, will include a coffee hour from 9:30 to 11:30 A.M. on Monday, June 22 and Tuesday, June 23. (Room to be announced).

There will be a Fashion Parade by the Tweed Shop at 1:00 P.M. on Monday, June 22. Models for this will be members of the Knox County Auxiliary.

HONORARY MEDALS

Presentation of the Association's Honorary Pins will be made by Eugene E. O'Donnell, M.D., President, at the Annual Banquet, Monday evening, June 22 at 6:30 P.M.

Fifty-Year Pins

Fifty-Year Lapel Pins will be presented to the following members who were graduated from Medical School in 1909:

Cumberland County

Frank E. Carmichael, M.D., Portland

Penobscot County

George I. Higgins, M.D., Newport

York County

Willard H. Bunker, M.D., York Harbor

James W. Sever, M.D., Cape Neddick

County Delegates — 1959

FIRST DISTRICT

Cumberland County Medical Society

Delegates

(2 years)

David S. Wyman, M.D., 47 Deering St., Portland

Laban W. Leiter, M.D., 175 Vaughan St., Portland

Richard B. Stephenson, M.D., 131 State St., Portland

Stanley B. Sylvester, M.D., 1377 Washington Ave., Portland

(1 year)

Harold L. Osher, M.D., 131 Chadwick St., Portland

Robinson L. Bidwell, M.D., 31 Bramhall St., Portland

Charles R. Glassmire, M.D., 58 Deering St., Portland

Manu Chatterjee, M.D., 11 McKeen St., Brunswick

Alternates

(2 years)

George I. Geer, Jr., M.D., 690 Congress St., Portland

Donald P. Cole, M.D., 31 Deering St., Portland

Norman E. Dyhrberg, M.D., 323 Main St., Cumberland Mills

Sidney R. Branson, M.D., 37 Main St., So. Windham

(1 year)

Robert H. Pawle, M.D., Steep Falls

William F. Taylor, M.D., Providence Ave., Falmouth Foreside

Robert W. Agan, M.D., 144 State St., Portland

David K. Lovely, M.D., 46 Deering St., Portland

York County Medical Society

Delegates

J. Robert Downing, M.D., 35 Summer St., Kennebunk

Roger J. P. Robert, M.D., 331 Main St., Saco

S. Dunton Drummond, M.D., Bar Mills

Alternates

Kenneth J. Cuneo, M.D., 31 Summer St., Kennebunk

Fifty-Five-Year Pins

Fifty-Five-Year Pins will be presented to the following members who received Fifty-Year Medals in 1954:

Cumberland County

Charles L. Cragin, M.D., Portland

Franklin County

George L. Pratt, M.D., Farmington

Lincoln-Sagadahoc County

Harry F. Morin, M.D., Bath

Oxford County

Delbert M. Stewart, M.D., South Paris

Penobscot County

Carl J. Hedin, M.D., Brewer

Piscataquis County

Wilbur E. MacDougall, M.D., Bangor

York County

Laura B. Stickney, M.D., Saco

Ray L. Whitney, M.D., Cape Porpoise

Sixty-Year Pins

Sixty-Year Pins will be presented to the following members who received their Fifty-Year Medals in 1949:

Cumberland County

Albert D. Foster, M.D., Falmouth Foreside

Leon R. Jellerson, M.D., Elm St., North Berwick
Alexander W. Magocsi, M.D., York

SECOND DISTRICT

Androscoggin County Medical Society

Delegates

Ross W. Green, M.D., 33 Court St., Auburn

Romeo A. Beliveau, M.D., 89 Pine St., Lewiston

Paul J. LaFlamme, M.D., 78 Pine St., Lewiston

Alternates

Ralph Zanca, M.D., 86 Pine St., Lewiston

Vincent H. Beeaker, M.D., 85 Wood St., Lewiston

Wirt L. Davis, M.D., 91 Bartlett St., Lewiston

Franklin County Medical Society

Delegate

Paul A. Fichtner, M.D., 6 Pleasant St., Rangeley

Alternate

Wallace H. Duffy, M.D., 100 Main St., Farmington

Oxford County Medical Society

Delegates

Harry L. Harper, M.D., 17 Main St., South Paris

Walter G. Dixon, M.D., 16 Deering St., Norway

Alternates

Alfred Oestrich, M.D., 89 Congress St., Rumford

Linwood M. Rowe, M.D., 11 Franklin St., Rumford

THIRD DISTRICT

Knox County Medical Society

Delegates

Hugo Hochschild, M.D., 33 Main St., Thomaston

Alternate

Johan Brouwer, M.D., 56 Talbot Ave., Rockland

Lincoln-Sagadahoc County Medical Society*Delegates*

John F. Dougherty, M.D., 112 Front St., Bath
John F. Andrews, M.D., 20 West St., Boothbay Harbor

Alternates

Ralph C. Powell, M.D., Damariscotta
Edward L. Kinder, Jr., M.D., 1027 Washington St., Bath

FOURTH DISTRICT**Kennebec County Medical Society***Delegates*

Clarence R. McLaughlin, M.D., 345 Water St., Gardiner
Brinton T. Darlington, M.D., Westwood Road, Augusta
Oakley A. Melendy, M.D., 21 Western Ave., Augusta
Arthur H. McQuillan, M.D., 177 Main St., Waterville
George J. Robertson, M.D., 33 College Ave., Waterville

Alternates

Hugh J. Mathews, Jr., M.D., 345 Water St., Gardiner
Vaughn R. Sturtevant, M.D., 33 College Ave., Waterville
James N. Shippee, M.D., 122 Main St., Winthrop
Richard N. Fallon, M.D., 21 Western Ave., Augusta
Richard L. Chasse, M.D., 173 Main St., Waterville

Somerset County Medical Society*Delegate*

George E. Sullivan, M.D., R.F.D. No. 1, Fairfield

Alternate

Howard L. Reed, M.D., 68 Water Street, Skowhegan

Waldo County Medical Society*Delegate*

Ward A. Albro, M.D., 27 Northport Ave., Belfast

FIFTH DISTRICT**Hancock County Medical Society***Delegates*

James H. Crowe, M.D., 121 Main St., Ellsworth
Herbert T. Wilbur, Jr., M.D., Southwest Harbor

Alternates

Marcus A. Torrey, M.D., 75 State St., Ellsworth
Philip L. Gray, M.D., Blue Hill

Washington County Medical Society*Delegate*

James C. Bates, M.D., Eastport

Alternate

Perley J. Mundie, M.D., 111 Main St., Calais

SIXTH DISTRICT**Aroostook County Medical Society***Delegates*

Thomas G. Harvey, M.D., 46 So. Main St., Caribou
Raymond G. Giberson, M.D., 555 Main St., Presque Isle
Arthur K. Carton, M.D., Market Square, Houlton

Alternates

Robert A. Graves, M.D., 3 Green St., Fort Fairfield
Thomas V. Brennan, M.D., 555 Main St., Presque Isle
Charles G. Burr, M.D., 90 Court St., Houlton

Penobscot County Medical Society*Delegates*

Wilfred I. Butterfield, M.D., 119 Main St., Lincoln
Arthur N. Lieberman, M.D., 180 Broadway, Bangor
Nelson P. Blackburn, M.D., 489 State St., Bangor
Donald E. Bridges, M.D., 209 State St., Bangor
John A. Woodcock, M.D., 35 Second St., Bangor

Alternates

Donald F. Macdonald, M.D., 263 State St., Bangor
Bourcard Nesin, M.D., 10 Water St., Howland
Richard F. Desjardins, M.D., 240 Penobscot Ave., Millinocket
Edward L. Curran, M.D., 209 State St., Bangor

Piscataquis County Medical Society*Delegate*

Linus J. Stitham, M.D., 50 Main St., Dover-Foxcroft

Alternate

Charles H. Lightbody, M.D., No. Main St., Guilford

Scientific and Educational Exhibits**Maine Trauma Committee, American College of Surgeons**

Case reports with x-rays showing different methods of treatment for common and uncommon traumatic conditions.

Maine Radiological Society

Series of 30 Kodachrome slides on "Radiation Protection" prepared by the American College of Radiology. Edited by the Maine Radiological Society.

M.M.A. Committee on Hospital Infections

Poster backdrops depicting epidemiology of staphylococcal disease. Handout material and literature.

Maine Academy of General Practice

Poster display.

Maine Society of Anesthesiology

Late Sequelae of Saddle Block Anesthesia in Obstetrics.

M.M.A. Committee on Alcoholism

Display of literature on treatment of alcoholism; and the facilities of the Maine Division

of Alcoholic Rehabilitation and its cooperative activities with the doctors of the Maine Medical Association.

World Medical Association

This display comprises a mounting of the flags of the 55 member associations of W.M.A.

Health Insurance Council**Maine Cancer Society****Maine Chapter, Multiple Sclerosis Society****Tobacco Industry Research Committee****FILMS****Maine Society of Obstetrics and Gynecology**

Cold Coning of the Uterine Cervix
H. Wright Seiger, M.D.

Maine Society of Clinical Hypnosis

Hypnosis for Obstetrical Delivery
W. S. Kroger, M.D. Commentary by J. B. DeLee, M.D.

M.M.A. Committee on Hospital Infections

The Epidemiology of Staphylococcal Infections

Technical Exhibits

- Abbott Laboratories, North Chicago, Illinois**
Representatives: Mr. J. L. Keliher, Mr. P. J. Morrisette
- Alkalol Company, Taunton, Mass.**
Representative: Mr. E. W. LeClair
- American Ferment Co., Inc., 1450 Broadway, New York 18, N. Y.**
Representative: Mr. George H. Shaw
- Ames Company, Inc., Elkhart, Indiana**
Representative: Mr. Gabriel Peluso
- Ayerst Laboratories, 245 Paterson Ave., Little Falls, New Jersey**
Representative: Mr. Edward C. McMahon
- The Baker Laboratories, Inc., 4614 Prospect Ave., Cleveland 3, Ohio**
Representative: Mr. H. W. Baker, Jr.
- Elmer N. Blackwell, Surgical Appliance Specialist, 207 Strand Bldg., Portland, Maine**
Representatives: Mr. Elmer N. Blackwell, Mr. Oakley R. Sanborn
- The Borden Company, 350 Madison Ave., New York 17, N. Y.**
Representatives: Mr. Joseph R. Galvin, Mr. John Ago
- Brewer & Company, Inc., 67 Union St., Worcester 8, Mass.**
Representatives: Mr. Sidney L. Segel, Mr. Walter Spaulding
- Buffington's, Inc., Worcester 8, Mass.**
Representative: Mr. C. W. Rich
- Burroughs Wellcome & Co. (U.S.A.) Inc., 1 Scarsdale Rd., Tuckahoe, New York**
Representatives: Mr. W. C. Murley, Mr. R. L. McQuillan
- Carnation Company, Carnation Bldg., Los Angeles 36, California**
Representatives: Mr. Richard Roberts, Mr. Russell Mundi, Mr. William Galatas
- Ciba Pharmaceutical Products, Inc., Summit, New Jersey**
Representatives: Mr. Charles W. Leighton, Mr. Paul E. Tibbetts
- The Coca-Cola Company, P. O. Drawer 1734, Atlanta 1, Georgia**
- Eaton Laboratories, Norwich, New York**
Representatives: Mr. L. W. Schelle, Mr. A. T. Snyder
- C. B. Fleet Co., Inc., 921-927 Commerce St., Lynchburg, Virginia**
Representative: Mr. William P. Ferrell
- Geo. C. Frye Co., 116 Free St., Portland, Maine**
Representatives: Mr. Milton S. Kimball, Mrs. John F. Kimball, Mr. Hubert A. Honan, Mr. Sidney F. Cheney, Mr. Millard C. Webber, Mr. Irving F. Beers
- Geigy Pharmaceuticals, P. O. Box 430, Yonkers, New York**
Representatives: Mr. Herbert L. Kern, Mr. Thomas L. Cowan
- Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York**
Representative: Mr. Rocco Maffei
- Eli Lilly and Company, Indianapolis 6, Indiana**
Representatives: Mr. W. W. Tullock, Mr. Erle C. Webber
- Maine Surgical Supply Company, 233 Vaughan St., Portland, Maine**
Representatives: Mr. Phil Richmond, Mr. Robert Axelsen, Mr. John H. Lacy
- The S. E. Massengill Company, Inc., 507 West 33rd St., New York 1, N. Y.**
Representatives: Mr. Ralph F. Blais, Mr. L. A. Larivee, Mr. L. C. Miller
- The Wm. S. Merrell Company, Cincinnati 15, Ohio**
Representatives: Mr. Joseph F. Crozier, Mr. Kenneth W. McConnell
- The P. J. Noyes Company, Lancaster, New Hampshire**
Representatives: Mr. Henry A. Haynes, Mr. Vernon L. Keene
- Ortho Pharmaceutical Corporation, Raritan, New Jersey**
Representative: Mr. Donald Zecher
- Parke, Davis & Company, Detroit 32, Michigan**
Representatives: Mr. Walter Nikitin, Mr. Merrill F. Dole
- Pfizer Laboratories, 630 Flushing Ave., Brooklyn 6, New York**
Representative: Mr. Wallace Houston
- A. H. Robins Company, Inc., 1407 Cummings Drive, Richmond 20, Virginia**
Representatives: Mr. Steve Owen, Mr. Hartwell Durrance
- J. B. Roerig and Company, 536 Lake Shore Drive, Chicago, Illinois**
Representative: Mr. Clarence J. Johnson
- William H. Rorer, Inc., 4865 Stenton Ave., Philadelphia 44, Pennsylvania**
Representative: Mr. Jefferson M. Beward
- Ross Laboratories, Columbus 16, Ohio**
Representatives: Mr. Harold Hutchinson, Mr. Richard Kaufman
- Sandoz Pharmaceuticals, Hanover, New Jersey**
Representative: Mr. Carrol Hayward
- W. B. Saunders Company, West Washington Square, Philadelphia 5, Pennsylvania**
Representative: Mr. Joseph Juneman
- Schering Corporation, Bloomfield, New Jersey**
Representatives: Mr. Floyd Selby, Mr. Jack Arlaud
- G. D. Searle & Company, P. O. Box 5110, Chicago 80, Illinois**
Representatives: Mr. H. J. Warnecke, Mr. A. L. Grimes
- Smith, Miller & Patch, Inc., 902 Broadway, New York 10, N. Y.**
Representatives: Mr. Paul L. Woodward, Mr. Kenneth J. Mullen
- E. R. Squibb & Sons, 745 Fifth Ave., New York 22, N. Y.**
Representative: Mr. W. E. Allard
- Surgeons' and Physicians' Supply Co., 961 Commonwealth Ave., Boston 15, Mass.**
Representative: Mr. Charles H. Joy
- The Upjohn Company, 17 Deerfield St., Boston 15, Mass.**
Representatives: Mr. William J. Kayatta, Mr. Paul G. Hudson, Mr. Robert D. Beverly, Mr. Raymond A. Clemons
- U. S. Vitamin Corporation, 250 East 43rd St., New York 17, N. Y.**
Representatives: Mr. William G. Moran, Jr., Mr. John R. Winfield
- Warner-Chilcott Laboratories, Morris Plains, New Jersey**
Representatives: Mr. William Comyns, Mr. Robert P. Ewing
- Winthrop Laboratories, 1450 Broadway, New York 18, N. Y.**
Representatives: Mr. R. W. Blanchard, Mr. E. F. Kittredge

In Memoriam

Androscoggin County

Romeo A. Bernard, M.D.	Lewiston
Leroy C. Gross, M.D.	Auburn
Albert W. Plummer, M.D.	Lisbon Falls

Aroostook County

Leslie H. Huggard, M.D.	Limestone
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Cumberland County

William H. Bradford, M.D.	Portland
Albert A. Darche, M.D.	Westbrook
Eugene H. Drake, M.D.	Portland
Charles H. Gordon, M.D.	Portland
Adam P. Leighton, M.D.	Portland
William H. Shanahan, M.D.	Portland

Franklin County

John H. Moulton, M.D.	Rangeley
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Kennebec County

Napoleon Bisson, M.D.	Waterville
Roscoe L. Mitchell, M.D.	Hallowell
Thomas C. McCoy, M.D.	Waterville
Oliver W. Turner, M.D.	Boothbay Harbor

Knox County

Charles H. Leach, M.D.	Tenants Harbor
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Lincoln-Sagadahoc County

Clarence R. O'Crowley, M.D.	South Bristol
Ardenne A. Stott, M.D.	Bath

Oxford County

H. Louella Noyes, M.D.	Rumford
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Penobscot County

John B. Thompson, M.D.	Bangor
Frank D. Weymouth, M.D.	Brewer

Waldo County

George W. Holmes, M.D.	Belfast
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York County

James H. Macdonald, M.D.	Kennebunk
Dana B. Mayo, M.D.	Kennebunkport
Edward E. Shapleigh, M.D.	Kittery

Committee Reports — 1958-59

Special Committees

Committee on Hospital Infections

At a meeting of the Committee on Hospital Infections held in Augusta on April 13, 1959, the purpose of the committee was outlined and the duties of the committee defined. The results of the discussion concerning these matters are as follows:

Purpose of this Committee:

1. To have an infection control committee in every hospital.
2. To help hospitals take the necessary steps in carrying out a proper control program.
3. To urge a program of education in each county regarding staph infections.
4. To determine the extent of nosocomial staph infections in our state.

Infection Control Committee — (in every hospital)

A. Composition:

It should be a standing committee of the medical staff. It should have representation from at least the medical, surgical, administrative and nursing departments. It is also highly desirable, if possible, to have representation from pediatric, housekeeping and laboratory services.

B. Duties of the committee:

1. To meet monthly to evaluate hospital sepsis and to submit a report to the medical staff.
2. To determine the extent of sepsis within the hospital and to keep records, especially emphasizing infections occurring during hospitalization.
3. To formulate rules re:
 - a) Hospital personnel working with staph infections.
 - b) Isolation of patients infected with staph.
 - c) Traffic control in O.R., OB. nursery and isolation areas.
 - d) Aseptic technic, use of gown, mask and dressing cart.

4. To be responsible for an educational program for doctors, nurses and hospital employees.
5. To review and supervise laundry handling and procedures.
6. To review and supervise housekeeping practices (brooms, vacuum cleaners, germicides).
7. To discourage the prophylactic use of antibiotics.
8. To review and supervise the handling of food, water and ice.
9. To check on air pollution in air conditioning, O₂ tents.
10. To consider some method of checking on patients after discharge relative to staph infections.

Training Aids

Films:

1. Epidemiology of Staphylococcus Infection — colored, sound. This is being purchased by the State Public Health Service and will be available from them.
2. Selected material on Environmental Aspects of Staphylococcus. Deals with laundry, floor cleaning, diet kitchen, etc. Obtainable from Superintendent of Documents, Government Printing Office for \$1.50.
3. Proceedings of National Conference on Staphylococcal Disease. Available free from Squibb & Company Salesmen. (Very Good.)
4. A Guide for Hospital Inservice Training Program. To be published and supplied to all hospitals.

GEORGE F. SAGER, M.D., *Chairman*

Diabetes Committee

To the Officers and Members of the Maine Medical Association:

The annual Diabetes Detection Drive held in November, 1958 got off at a good start and the results were far in excess of any previous year. There were several factors responsible for the successful operation; foremost, was the early interest demonstrated by the executive office of the Maine Medical Association. The County Chairmen were much more active than in previous years and Dr. Melvin Bacon of York County with his Diabetic Fair accounted for 14,175 urines examined which shows what cooperation among physicians, nurses and industrial plants can do in any one area.

Early in September, the State Diabetes Committee met with the President and Secretary of the Maine Medical Association, the President and Secretary of the Maine Pharmaceutical Association, the State Commissioner of Health and the Chairmen of the Diabetes Committees of both the Maine Medical and Pharmaceutical Associations. Plans were made for a statewide program. The importance of public education and detection were discussed and those responsible for each area

were asked to work out a plan best suited to their locality. The druggists agreed to act as collecting stations and whenever asked by local chairmen would actually examine urines. It was requested that the reports of the urine examinations, from whatever source obtained, be sent to the family physician.

During the week preceeding the drive, there was a one-day seminar on diabetes at the Maine Medical Center. In the forenoon, various speakers dealt with the practical use of diet in the lower income groups and the use of insulin and oral drugs in the disease. The afternoon was especially interesting when nurses and dieticians put on a play which dealt with the patient from the time of admission to the hospital until discharge with follow-up in the outpatient department. The seminar was well attended but due to seating capacity, had to be limited to nurses and dieticians throughout the state.

The State Diabetes Committee wishes to express its thanks to all those who contributed to the success of the Detection Drive. This included the executive office of the Maine Medical Association, physicians, nurses, hospitals, the State Depart-

ment of Health, the Maine Pharmaceutical Association and the press, radio and television stations.

There were 30,102 urine specimens examined in the state, with 216 new cases reported. Of this total number examined, 14,175 were done by Dr. Melvin Bacon and his co-workers in York County. The 216 new cases found is a conservative figure as it is now estimated that from 1.5 to 2% of the population have diabetes. Due to the lack of money, blood sugar analysis at the time of the urine tests were possible only in a few instances. It is hoped that the family physicians were able to do this.

Inasmuch as no money is available for the yearly detection drive with the occasional exception of that donated by the local medical societies, this must be considered a public service concerning which the public should be informed by the press. With the increase in the incidence of diabetes, this disease can become a public health problem and should be kept within the control of the private physician. Early detection and treatment is the best means of preventing blindness, kidney disease and loss of limb of those affected.

ELTON R. BLAISDELL, M.D., *Chairman*

Committee on Conservation of Vision

A meeting of this committee was held on April 13, 1959. A number of topics were discussed in regard to the program of the State of Maine Department of Health and Welfare's program of eye care — the fee for refraction and complete examination, the question of providing refractive correction for school children with severe eyestrain from hypermetropia and the request of the Maine Optometric Association to consider how optometrists might aid on the state program. Interest was shown in having better information supplied to the ophthalmologists about vocational rehabilitation of

the blind, and it was decided to ask the State's Division of Services for the Blind for a speaker on vocational rehabilitation for the blind at the meeting for the Section on Ophthalmology at the June meeting of the Maine Medical Association. Also discussed were the plans for the glaucoma detection clinic being held in June by the Lions Clubs' Maine Sight Conservation Association, Inc.

There were no new recommendations.

DEXTER J. CLOUGH, 2ND., M.D., *Chairman*

Committee on Mental Health

The Chairman attended the Fifth Annual Conference of Mental Health Representatives of State Medical Associations, November 21 and 22, 1958 at the Drake Hotel in Chicago, Illinois.

Group discussions were held on the following topics:

1. "Emotional Block versus Brain Damage in the Diagnostic Categories of Mental Retardation of Mental Deficiency in School Children"
2. "Communicability of Mental and Emotional Illness"
3. "Education for Psychiatric Medicine"
4. "The Joint Commission of Mental Illness and Health — Progress and Problems"
5. "Mental Illness and Health in the Aged" — attended by Maine Committee Chairman.

The meeting was stimulating and the discussions were valuable and comprehensive in so far as time permitted. The groups were well moderated and well organized. All in attendance were enthusiastic. Copies of the reports were made available to each member of the Mental Health Committee.

During the past year there has been very marked activity on the part of the citizenry of the state regarding matters of mental health. Largely through the efforts of Dr. Peter Bowman of the Pineland Hospital and Training Center, the first International Conference on Mental Retardation will be held at the Eastland Hotel in Portland, Maine, July 27 through 31, 1959. An excellent program has been arranged, and the conference should reemphasize the need for continued efforts both in the field of professional research and treatment of mental retardation.

The two new clinics established during the last year, one at Bangor and one at Lewiston, under the aegis of Bangor State Hospital and Augusta State Hospital, have functioned very well indeed. Governor Clauson, in his budget message, emphasized the need for expansion of such clinics.

The State Committee on Mental Health, under its chair-

man, Miss Mary G. Worthley, has also placed in circulation a thirty-seven page handbook on Mental Health in Maine. This handbook was written to inform people about the mental health situation in Maine, as the Committee sees it, and what can be done about it.

If there is sufficient demand, it will be printed. Among other things, the State Committee on Mental Health made recommendations to the legislature for reorganization of the central department of Institutional Services. It calls for more professional personnel in the central department. In general, the recommendations of the committee regarding reorganization were similar to those of the Department of Institutional Services.

Considerable new construction has been made available during the past year to relieve overcrowding and improve service in the three major institutions in this field; namely, Augusta State Hospital, Bangor State Hospital and Pineland Hospital and Training Center.

Other proposed legislation having direct relationship to the mental health problems of Maine were as follows:

AN ACT Creating a Committee to Study Establishment of a Residential Treatment Center for Emotionally Disturbed Children. Under this proposed legislation the Commissioner of Institutional Service appoints a committee of three persons to study, plan and make recommendations concerning the establishment of a residential treatment and rehabilitation center for emotionally disturbed children.

AN ACT Creating a Committee to Study Establishment of Vocational Facilities for the Mentally Ill and Retarded. Under this act the Commissioner of Institutional Service appoints a committee of three persons to study, plan and make recommendations concerning the development of vocational rehabilitation facilities or halfway houses for the mentally ill and mentally retarded.

AN ACT to Revise Certain Laws of the Department of In-

stitutional Service makes all orders of commitment, medical and administrative records, in the department confidential. Such records may be subpoenaed only by a court of record. The same proposed bill amends the words "insane" and "insanity." Whenever in the Revised Statutes or public laws or private and special laws the words "insane" or "insanity" appear, they shall be amended to the words "mentally ill" and "mental illness" except in all instances where the word "insane" is in reference to the word criminal.

AN ACT Relating to Juvenile Offenders provides that if, in any proceeding before a juvenile court, the court has cause to believe that the juvenile is mentally retarded, the court may require such juvenile to be tested by any qualified psychiatrist for a determination of said juvenile's mental age,

and the result of said test shall be certified to the court. The same bill proposes disposition of such cases into the proper type of institution for their care.

A meeting of the committee, attended by Drs. Sleeper, Bergmann and Pooler, was held April 4th at the Augusta State Hospital. The matter of psychologists practicing medicine was discussed, together with the above mentioned subjects.

FRANCIS H. SLEEPER, M.D., *Chairman*

JEROME W. BERGMANN, M.D.

HAROLD A. POOLER, M.D.

FRANK S. BROGGI, M.D.

NICHOLAS FISH, M.D.

Committee on Civil Defense

The Committee on Civil Defense of the Maine Medical Association has met twice since the last report. The first of these two meetings was held at Rockland during the annual meeting of the Association in June, 1958. A report and briefing on Chemical and Biological Warfare possibilities and potentialities was given the committee members by the chairman. The need for someone to head up the medical care section of the Health Services Division of the State Civil Defense Agency was presented and various persons who might accept this assignment were suggested by the committee members. Clyde I. Swett, M.D., the State Civil Defense Health Services Director, agreed to make the approach to the individuals to see if someone would serve on his staff.

The second committee meeting was held in Portland late in the afternoon on the day of the Fall Clinical Session in 1958. A full consideration of a State Civil Defense proposal that a Health Services Advisory Committee be formed comprised the main topic of discussion at the second meeting. All members were agreed that this advisory committee when proposed by the State Civil Defense Director would be too cumbersome and unwieldy. The committee agreed that this advisory group should be made up of the Chairmen of the Maine Medical Association, the Maine Dental Association, the Maine Nurses Association, the Maine Pharmaceutical Association, the Maine Hospital Association and the Maine Osteopathic Association. The recommendation of the Committee on Civil Defense of the Maine Medical Association was subsequently adopted by the Director of the Maine Civil Defense and the Public Safety Director.

The Civil Defense Committee again discussed with Dr. Clyde Swett, State Civil Defense Health Services Director, a doctor to head up his medical care section. This important post was still unfilled.

The Committee on Emergency Disaster Medical Care of the American Medical Association held a meeting in September of 1958 in Boston at which time the Executive Secretaries, the Chairmen of the State Medical Association's Committees on Civil Defense and the Woman's Auxiliary chairman of each of

the New England states, New York and New Jersey attended. Reports were rendered on the progress made and on the problems encountered with Civil Defense planning in each of these states.

Since your committee chairman was a member of the AMA committee, it was thought best to have Dr. Clyde Swett, Director of the Health Services Division of the State Civil Defense Agency and a member of this committee, make the State Medical Report. Dr. Swett made a very fine presentation. Mrs. Mabelle C. Steele represented the Committee on Civil Defense of the Woman's Auxiliary and she made a report on the women's medical activities and outlined the Grandma's Pantry Plan which she had augmented and which had been adopted by the Maine State Civil Defense activities.

In addition to the above activities of the Committee, Dr. Swett has been very active in Medical Civil Defense matters in his capacity as Director of the Health Services Division of the State Civil Defense Agency. The chairman of this State Medical Committee has served as special advisor to the State Civil Defense Director and as a member of the committee on Emergency Medical Care of the American Medical Association and as liaison member to the Committee on Civil Defense of the American Chemical Association. He has attended the regional meetings of the American Medical Association's Committee on Emergency Medical Care held in Boston in September, 1958 and in April, 1959 at Colorado Springs, Colorado.

In addition, the chairman of the Maine Medical Association's Committee on Civil Defense has attended a briefing in chemical and biological warfare at Fort Detrich, Maryland in November, 1958, with the American Chemical Society's Committee on Civil Defense and a somewhat similar meeting with the American Medical Association's Committee on Emergency Medical Care at Fort Detrich in February, 1959.

Another meeting of this committee will, if possible, be held before the annual meeting of the Maine Medical Association in June, 1959.

CHARLES W. STEELE, M.D., *Chairman*

Amy W. Pinkham Fund Committee

The Amy W. Pinkham Fund was created by bequest of Miss Amy W. Pinkham, Portland, in 1941. The sum of \$20,000 was left in trust, the interest of which was to be used for "tubercu-

lous or malnourished children, preferably from rural areas." The Court of Probate of Cumberland County, assigned the administration of the trust to the Maine Public Health Association,

now the Maine Tuberculosis Association. In the assignment, provision was made for a committee from the Maine Medical Association to serve in a consultative and advisory capacity to the Maine Tuberculosis Association.

The first use of the Amy Pinkham funds was to establish a demonstration program of secondary school work for patients in sanatoria. Financial responsibility for this work was later assumed by the state.

Following a state-wide survey in 1951 to determine how

many schools were serving pasteurized milk in their lunch program and of the availability throughout the state of pasteurized milk; a program to help initiate new school lunch programs or to assist those struggling to meet standards was started.

Since the inception of this program thirty capital equipment grants to schools have been processed. In each instance the school receiving a grant has guaranteed to serve pasteurized milk only. The grants awarded have been as follows:

<i>Name of School</i>	<i>Town</i>	<i>Equipment</i>	<i>Cost</i>	<i>Daily student Participation</i>
Ashland	Ashland	Refrigerator	\$250.00	125
Ellsworth Falls	Ellsworth	Refrigerator	250.00	82
Harmony	Harmony	Refrigerator	250.00	85
Strong Village	Strong	Refrigerator	100.00	98
Sebec	Sebec	Refrigerator	250.00	67
Milliken	Kezar Falls	Deep Well Sink	125.00	130
Williams High Con.	Oakland	Deep Well Sink	108.01	212
Howland Consolidated	Howland	Refrigerator	160.00	78
Stratton	Stratton	Deep Well Sink	120.00	65
Cherryfield	Cherryfield	Refrigerator	250.00	89
Garland Village	Garland	Refrigerator	186.96	49
Surry	Surry	Refrigerator	225.00	55
Welchville	Welchville	Refrigerator	250.00	92
Pleasant Ridge	Caswell Plt.	Refrigerator	250.00	40
West Paris	West Paris	Gas Range	245.00	80
Trenton	Trenton	Refrigerator	250.00	67
Limington	Limington	Refrigerator	200.00	200
Friendship Village	Friendship	Refrigerator	250.00	70
Springfield	Springfield	Refrigerator	250.00	106
Plymouth	Plymouth	Deep Well Sink	120.00	73
Princeton	Princeton	Refrigerator	200.00	221
New Portland	New Portland	Refrigerator	250.00	65
Detroit	Detroit	Deep Well Sink	193.37	100
New Sharon	New Sharon	Refrigerator	150.00	73
Sherman	Sherman	Milk Cooler	211.85	220
South Thomaston	South Thomaston	Partitioning	100.00	83
Frenchville	Frenchville	Dishes & Bowls	60.52	275
James H. Bean	Sidney	Refrigerator	250.00	146
Kingfield	Kingfield	Refrigerator	250.00	150
Island Falls	Island Falls	Deep Well Sink	250.00	195

In 1954 at the request of the Medical Association's committee a questionnaire was directed to the superintendents of schools which had received grants asking (1) was the program worthwhile and had it been helpful, and (2) could they recommend any program in which the monies available could be expended more usefully or to greater advantage. The universal answer was that the program had been most helpful and that they could not recommend a better use for the money.

During the fiscal year ending March 31, 1959, school hot

lunch program grants were awarded to the following schools in Maine in accordance with policy governing Amy Pinkham Fund grants:

Kingfield	9/25/58	Refrigerator	\$250.00
Island Falls	2/23/59	Deep Well Sink	250.00

After the struggling programs in these school communities came to the attention of this office, the local tuberculosis and health association worker serving the area was requested to visit the school in question and determine the facts, the

need and the community interest. Need, local interest and permanence of the program ascertained, the superintendents of the school unions concerned were approached for further information. On the basis of the findings of the tuberculosis association workers and statements of the superintendents the grants were awarded. In neither of these two cases did the \$250.00 grant cover the full cost of the equipment and installation, local funds supplying the balance. In each instance the schools concerned agreed to serve pasteurized milk only.

The report of the financial operation of the Pinkham Fund for the fiscal year reported (April 1, 1958-March 31, 1959) is as follows:

Cash in checking account (National Bank of Commerce)	\$1,085.56
Interest received during year (Less bank charges \$26.26)	498.74

Total receipts \$1,584.30

Funds available for program	\$1,584.30
Expended for projects	500.00

Balance on hand, March 31, 1959 \$1,084.30

The accounts of the Amy W. Pinkham Fund are included in the annual audit performed for the Maine Tuberculosis Association by the firm of Jordan and Jordan, Portland, certified public accountants. As heretofore, all travel and administration costs of this program were contributed by the Maine Tuberculosis Association.

It may well be that now several years have elapsed since this program was inaugurated that some other program or project would be preferable. None has yet seemed better and struggling lunch program are continually being noted. However, both the Maine Tuberculosis Association and the Amy W. Pinkham Committee of the Maine Medical Association would welcome meritorious suggestions.

NORMAN H. NICKERSON, M.D., *Chairman*

Maine Committee, American Medical Education Foundation

The eighth annual AMEF state chairmen's meeting was held at Chicago's Palmer House, January 24 and 25, 1959. Addressing the opening session Saturday evening were George F. Lull, M.D., President of the Foundation, Mrs. E. Arthur Underwood, President of Woman's Auxiliary to the A.M.A., Gunnar Gundersen, M.D., President of the A.M.A. and Hugh H. Hussey, M.D., Dean of the Georgetown University School of Medicine, a member of the A.M.A. Board of Trustees, and AMEF Board of Directors. In his key-note address Dr. Hussey emphasized the importance of AMEF funds to the medical school by illustrating some recent applications of foundation money at Georgetown. He also urged a change in the appeal made by the foundation to the medical profession. "Rather than stress AMEF contributions as payment for a debt owed, let us instead emphasize that they are current tuition fees." Continuing, Dr. Hussey said, "The learning process didn't stop at graduation. If it had you wouldn't know half as much as the residents at the hospitals where you treat your patients . . . you've been learning ever since you left medical school. And the chief source for that learning has been the same school from which you graduated. The only difference is that now they must depend on your conscience when it comes to collecting tuition."

"It can never be hoped that this Foundation can assume but a reasonably small part of the costs of the medical schools," said Dr. Gunnar Gundersen, A.M.A. president, "but it is proving of the utmost importance in demonstrating the profession's concern over the needs of the medical schools and in pointing up the responsibility of other groups." Dr. Gundersen also spoke of the profession's unique response to the financial plight of its schools. "I know of no other professional group in this country which has been called upon and has responded so well to the financial appeal of its schools," he said.

Dr. Lull, in his address of welcome, noted the great strides in both income and contributors made by the Foundation in its eight years. "A line graph would chart an almost vertical rise,"

said Dr. Lull, "when showing the growth of contributors from 1,800 to nearly 50,000 and of income from a few thousand dollars to well over a million."

Mrs. E. Arthur Underwood pledged the continued support of the Woman's Auxiliary and assured the guests, that again in the coming year AMEF would rank as one of the Auxiliary's prime projects.

Edward L. Turner, M.D., secretary to the Council on Medical Education and Hospitals of the American Medical Association, as well as secretary-treasurer of the Foundation, opened Sunday's meeting with a resume of the current status of medical schools. Leading a list of problems which Dr. Turner said now face all medical schools were those of faculty recruitment and over-all financing.

Three new, provisionally approved schools, now bring the total to 85, which last year had a combined total enrollment of 29,473. The first year enrollment was 8,030, the largest on record. Applicants totaled 15,791 with a ratio of approximately two applicants per admission. Nearly four applications were filed by each applicant, according to Dr. Turner.

Dr. Turner mentioned the new Educational Council for Foreign Medical Graduates which will verify credentials of graduation, of Foreign physicians entering this country, determine basic knowledge of English, and evaluate whether or not the candidate has the equivalent knowledge required of U. S. graduates prior to eligibility for internship.

The nation's 85 medical schools early in February have received their share of the record \$1,133,654 contributed to the American Medical Education Foundation during the past year.

U. S. physicians topped 1957 contributions by 15%. The grants are made to the schools with no restrictions as to how the money must be spent.

THOMAS F. FAY, M.D., *Chairman*

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Secretary, Clyde I. Swett, M.D., Island Falls

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Secretary, Karl V. Larson, M.D., East Machias

YORK

President, William E. Dionne, M.D., Springvale
Secretary, C. W. Kinghorn, M.D., Kittery

County Society Notes

AROOSTOOK

May 27, 1959

Following a social hour and dinner at the Northeastland Hotel in Presque Isle, the annual meeting was called to order by President John B. Madigan, M.D. He welcomed the gathering and introduced the guests. The minutes of the previous meeting and the Treasurer's annual report were read and accepted.

It was voted to recommend to the House of Delegates of the Maine Medical Association that Leonid G. Toussaint, M.D., and Richard L. Savage, M.D. be accepted as Affiliate Members in accordance with Chapter 1, Section 5 of the By-Laws due to being physically disabled by Coronary Disease and that Dr. Savage's reclassification include 1958.

Harry M. Helfrich, Jr., M.D. gave the report of the delegates to the M.M.A. He read the proposed budget and reported on the progress of hospital liability insurance. It was voted to accept the report of the delegates, to approve the proposed budget of the M.M.A., that the need for hospitals to carry public liability insurance be approved in principle and that a doctor from each hospital report progress to Dr. Helfrich.

A motion was passed that members of the society promote polio immunizations in the county including a fourth polio injection followed by a booster injection after four years.

Another motion was passed that doctors should not participate in any clinic that operates for a profit to any individual or group.

Chester F. Hogan, M.D. presented a film on the detection of glaucoma and gave a short talk on the need for every GP to include tonometry in his routine examinations. Clyde I. Swett, M.D. spoke on the charitable work done by the Maine Sight Conservation Association, a non-profit organization sponsored by the Lions of Maine, in the detection and treatment of glaucoma for medically indigent citizens of Maine.

Eugene E. O'Donnell, M.D., President of the Maine Medical Association, who was present with his wife as special guests of the meeting, spoke briefly on matters pertinent to the welfare of the society. His talk was well received and timely in presentation.

Charles G. Burr, M.D. presented a problem on ethics and personal economy in his dealings with the Maine Industrial Accident Commission. The members felt that more study should be given the issues raised by this problem. No action was taken.

The nominating committee consisting of Drs. Clement L. Donahue, Rosario A. Page and Chester F. Hogan presented the following slate of officers for 1959-1960 which were duly elected.

President: Robert B. Somerville, M.D., Presque Isle
Vice-President: Carroll H. Smith, Jr., M.D., Presque Isle
Secretary-Treasurer: Clyde I. Swett, M.D., Island Falls
Board of Censors: H. Draper Warren, M.D., Caribou (1961), Gerald H. Donahue, M.D., Presque Isle (1960) and Harry M. Helfrich, Jr., M.D., Presque Isle (1962).
Delegates to the Maine Medical Association (1959-1961): Thomas G. Harvey, M.D., Caribou, Raymond G. Giberson, M.D., Presque Isle and Arthur K. Carton, M.D., Houlton.
Alternates: Robert A. Graves, M.D., Fort Fairfield, Thomas V. Brennan, M.D., Presque Isle and Charles G. Burr, Houlton.

Grievance Committee: Board of Censors and Officers of the Society.

Other committees are to be appointed later by the president.

Correspondence was read by the Secretary and no action was required.

The members voted that the next meeting be held in Houlton and next voted to adjourn.

CLYDE I. SWETT, M.D.
Secretary

PENOBSCOT
May 19, 1959

The May meeting of the Penobscot County Medical Society was held at the Tarratine Club on Tuesday, May 19, 1959. President, John E. Whitworth, M.D. called the business meeting to order. Dr. George W. Wood III briefly presented a resume of the meeting of the Executive Committee with the Council of the Maine Medical Association. Following this report it was moved and seconded that an extra business meeting of the County Society be held in June. Dr. Philip Blinder was unanimously elected to membership in the Society.

Dr. Whitworth introduced the speaker of the evening, Joshua B. Burnett, M.D. of the Hitchcock Clinic and Dartmouth Medical College, Hanover, New Hampshire, who reported on his clinical experiences in the treatment of gout.

The meeting adjourned at 9:30 p.m.

WARREN G. STROUT, M.D.
Secretary

WASHINGTON
May 8, 1959

A regular meeting of the Washington County Medical Society was held on Friday, May 8, 1959 at the St. Croix Country Club with 22 members and guests present.

H. Gordon Sears, M.D., President, introduced Daniel Tassel, M.D. of the New England Medical Center, Boston, Massachusetts. Dr. Tassel spoke on pyelonephritis and stated that many people with kidney infections are not diagnosed because even with clinical symptoms they do not have pus cells in their urine. He diagnosed many cases by culture of the urine and anyone with a bacterial count of 100,000 was considered to have an infection. Dr. Tassel stressed the danger of routine catheterization and thought that even a single catheterization might result in an eventual pyelonephritis. Simple aqueous Zephiran® cleansing of the urethra should be sufficient for most specimens. He thought every case of cystitis was an eventual candidate for pyelonephritis and should have a full two weeks course of Gantrisin®. Many that could not be cured by antibiotics could be treated by acidification of the urine using Mandelamine® and cranberry juice which might have to be continued for months. Dr. Tassel advised avoidance of the use of an antibiotic while an indwelling catheter was in

place because of the likely production of a bacteria that would be difficult to eradicate.

Members and their wives enjoyed a roast beef dinner served by the staff of DeMonts Restaurant.

KARL V. LARSON, M.D.
Secretary

YORK
May 13, 1959

The bimonthly meeting of the York County Medical Society was held on Wednesday, May 13, 1959 in Alfred, Maine. A social hour was held at the home of Carl E. Richards, M.D. followed by a chicken pie dinner and a meeting at the Chapel of the Congregational Church.

During the business meeting it was decided to hold two meetings each year for business only. The next meeting was changed from Kittery to the new hospital at York.

Frank N. Allen, M.D. of Boston, Massachusetts gave a very interesting talk on "Oral Agents and the Present Day Management of Diabetes."

There were 17 members and one guest present.

CHARLES W. KINGHORN, M.D.
Secretary

NEW MEMBERS

CUMBERLAND

Jacob Manol, M.D., 31 Deering Street, Portland
Giovanni Mazzone, M.D., Mercy Hospital, Portland
Irving J. Poliner, M.D., 235 State Street, Portland
Ferris S. Ray, M.D., 131 Chadwick Street, Portland

PENOBSCOT

Philip Blinder, M.D., 125 Broadway, Bangor

DECEASED

ANDROSCOGGIN

Albert W. Plummer, M.D., Lisbon Falls, May 1, 1959

KNOX

Charles H. Leach, M.D., Tenants Harbor, May 25, 1959

YORK

Edward E. Shapleigh, M.D., Kittery, April 27, 1959

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News and Notes



Mr. William A. McDonnell, President of the U. S. Chamber of Commerce, presenting merit award to Drs. Eugene E. O'Donnell and Daniel F. Hanley.

U. S. Chamber of Commerce Award for the M.M.A.

On April 28, 1959 at the 47th Annual Meeting of the Chamber of Commerce of the United States in Washington, D. C., the Maine Medical Association was presented with an Award of Merit for outstanding achievement in the public interest during 1958. The recognition was presented to the M.M.A. under the category of association achievement.

The award which pays special tribute to the Association's physician placement service was accepted by Eugene E. O'Donnell, M.D., President, and Daniel F. Hanley, M.D., Executive Director.

Dr. Hanley — U. S. Olympic Team Physician

Daniel F. Hanley, M.D., Executive-Director of the Maine Medical Association and Bowdoin College physician, has been appointed one of two doctors to serve as the medical staff for the 1960 U. S. Olympic Team. He will accompany the team to Rome where it will compete from August 25 to September 11, 1960.

Announcements

Physicians Licensed to Practice Medicine and Surgery in the State of Maine March, 1959

THROUGH EXAMINATION

- Benoit Ouellette, M.D., Quebec Military Hospital-Ste-Foy, Eastern Quebec Area-Ste-Foy, Canada
 Douglas H. Brown, M.D., Birchwood Road, Cape Elizabeth, Me.
 Francis F. Frenette, M.D., Plaster Rock, N. B., Canada
 Serge A. Giraldi, M.D., 180 Beechmont Dr., New Rochelle, N. Y.
 Kestutis Kemezys, M.D., 134 Egerton St., London, Ontario, Canada
 Kong Lee, M.D., 530 Devereux Ave., Philadelphia 11, Pa.
 Emil Mason, M.D., 3126 W. 14th St., Cleveland, Ohio
 Giovanni Mazzone, M.D., Mercy Hospital, Portland, Me.
 Adolph S. Schlesinger, M.D., 1000 Queen Anne Rd., Teaneck, N. J.
 Emanuel A. Samouhas, M.D., 518 North Shore Dr., Crystal Lake, Ill.
 Gisak Petrossian, M.D., 9 Crest Lane, Levittown, N. Y.
 John Milazzo, M.D., 1762 Brooklyn Ave., New York, N. Y.
 John G. Mendros, M.D., St. Mary's Hospital, Lewiston, Me.
 Paul Stucki, Jr., M.D., Maine Medical Center, Portland, Me.
 Alexander Strilbycky, M.D., 2025 Arlington Ave., Toledo 9, Ohio

THROUGH RECIPROCITY

- Stanley W. Kent, M.D., 220 Aspinwall Ave., Brookline, Mass.

- Janis Urjanis, M.D., Pineland Hospital and Training Center, Pownall, Me.
 John Gemmill Bisgrove, M.D., 18 Oak Tree Lane, Ashland, Mass.
 John C. Snow, M.D., 20 Temple St., Boston, Mass.
 John H. Leonard, M.D., 56 Poole Circle, Holbrook, Mass.
 Henry McKenney Trask, M.D., 168 Hicks Street, Brooklyn 1, N. Y.
 David P. Dutton, M.D., Freedom, N. H.
 Paolo Maria Reyneri, M.D., Bellevue Medical Center, New York 16, N. Y.

Woman's Hospital Division of St. Luke's Hospital Postgraduate Course

The Woman's Hospital Division of St. Luke's Hospital in New York City offers a one week course in "The Conduct of Labor and Delivery." This is for general practitioners and thirty hours Category I Credit is allowed by the American Academy of General Practice.

The course consists of lectures, demonstrations, work in the Prenatal and Postpartum Clinics and assistance in the Delivery Room. Enrollment is limited as to numbers. If interested, please write to Mr. Carl P. Wright, Jr., Director, Woman's Hospital, 141 West 109th Street, New York City for prospectus and details. The time of the course is October 8 through October 14, 1959. Enrollment will close on September 15, 1959.

University of Vermont College of Medicine

A seminar on the electrocardiographic exercise test will be held at the DeGoesbriand Memorial Hospital, a teaching hospital of the University of Vermont College of Medicine, Burlington, Vermont, on September 19 and 20, 1959. Guest speakers will include Drs. E. Donoso, New York City; H. K. Hellerstein, Cleveland, Ohio; A. M. Master, New York City; T. W. Mattingly, Washington, D. C.; G. P. Robb, New York City; H. I. Russek, New York City and D. Scherf, New York City. There will be a \$10.00 registration fee for nonresidents of Vermont.

Inquiries should be directed to Eugene Lepeschkin, M.D., Associate Professor of Experimental Medicine, University of Vermont College of Medicine, Burlington, Vermont.

The American Goiter Association

The American Goiter Association announces that the Fourth International Goiter Conference will be held July 5 through 9, 1960, in London, England under the auspices of the London Thyroid Club and the American Goiter Association. The American Goiter Association plans to make available to worthy candidates a limited number of travel grants for participants of this meeting.

Application blanks are available from John C. McClintock, M.D., 149½ Washington Avenue, Albany 10, New York.

Second World Conference On Medical Education

Medical Educators from 50 different countries will gather in Chicago, Illinois from August 29 to September 4, 1959. The conference is being held under the auspices of the World Medical Association and collaborating with them in spon-

soring this conference are the World Health Organization, the Council for International Organizations of Medical Sciences and the International Association of Universities.

"Medicine — A Lifelong Study" is the theme of this conference. Subject titles for the four section sessions are: 1. Basic Clinical Training for All Doctors, 2. Advanced Education for General and Specialty Practice, 3. The Development of Teachers and Investigators and 4. Continuing Medical Education.

American Board Of Obstetrics And Gynecology

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, Part I, and requests for re-examination Part II are now being accepted. Deadline date for receipt of applications is August 1, 1959.

Candidates are requested to write to the office of the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio, for a current Bulletin in order that they might be well informed as to the present requirements. Application fee (\$35.00), photographs, and lists of hospital admissions must accompany all applications.

XIIIth General Assembly of the World Medical Association

The Canadian Medical Association will be host to the XIIIth General Assembly to be convened in Montreal, Canada, September 7 through 12, 1959. The tentative program includes a medical editors' conference, a socio-medical affairs discussion, a scientific program and exhibits. The registration fee is \$10.00 per person. Pre-registration and additional information may be obtained from: The Secretary General, The World Medical Association, 10 Columbus Circle, New York 19, N. Y.

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Necrologies

DANA B. MAYO, M.D.

1884-1959

Dana B. Mayo, M.D., of Kennebunkport, died April 19, 1959.

Dr. Mayo was born in Andover, Massachusetts on February 6, 1884, the son of Nathan I. and Addie Penny Mayo. He graduated from Wakefield High School in Massachusetts in 1901 and from Boston University in 1905. He received his medical degree from Harvard Medical School in 1906, served his internship at Boothby Hospital and in 1908 attended postgraduate courses in Vienna.

Dr. Mayo served in World War II from 1944 to 1946 as a captain in the Medical Corps. He had been an acting assisting surgeon with the U. S. Public Health Service, a member of the U. S. Judication Board in Washington, D. C. and he had served on the staff of veterans hospitals in Sun Mount,

New York and in Togus, Maine. He had served on hospital staffs in Portsmouth, New Hampshire, Barre, Vermont and Rockland, Maine and had practiced general and internal medicine in Island Pond and Randolph, Vermont, Somersworth, New Hampshire and Waldoboro and Eliot, Maine. Before Dr. Mayo moved to Kennebunkport upon his retirement, he had resided in Salmon Falls, New Hampshire.

A past president of the York County Medical Society, Dr. Mayo was an honorary member of that group and of the Maine Medical Association. He was also a member of the American Medical Association.

Surviving Dr. Mayo are his widow, Mrs. Agnes E. Mayo, a son, Dana B., Jr., and six grandchildren, all of Kennebunk, Maine.

ROScoe L. MITCHELL, M.D.

1877-1959

Roscoe L. Mitchell, M.D., of Hallowell, died April 21, 1959.

Dr. Mitchell was born in Hudson, Maine on April 7, 1877, the son of A. H. and Jennie Maria Mitchell. He attended the Higgins Classical Institute in Charleston, Maine and graduated cum laude from the University of Vermont Medical School in 1908. He did postgraduate work at the Philadelphia Lying-In Hospital, served internship in the Philadelphia Polyclinic Postgraduate Hospital and took a public health postgraduate course at Harvard College.

Dr. Mitchell did general practice in medicine and surgery in Portland in 1909 and 1910 and in Carmel from 1911 to 1930, served as district health officer of District No. 2 State Department of Health, Lewiston, and was assistant director of health, organizing maternal and child health programs. From 1939 to 1947 he was director of the Bureau of Health and state health officer for the Department of Health and Welfare, Augusta, organizing the tuberculosis control program.

For the past 10 years, Dr. Mitchell was engaged in private practice in Hallowell and Augusta, was city physician of Augusta, Kennebec County jail physician and on the staff of the Augusta General Hospital.

Dr. Mitchell was a member of the Kennebec County Medical Society and the Maine Medical Association and received his 50-year pin and honorary membership in 1957. He was also a member of the American Medical Association, the American Public Health Association, the Association of State Provincial Health Officers and the Maine Public Health Association.

A member of the South Parish Congregational Church, Dr. Mitchell also held membership in the Carmel Lodge Masons and the Scottish Rite bodies.

Surviving Dr. Mitchell are his widow, Mrs. Georgia Moores Mitchell; two daughters, Mrs. Ernest H. Hugonnet of New York City and Mrs. Mitchell Mezzullo, Augusta; two grandchildren, Mitchell Henry and Peter Harris Hugonnet, New York City, and several nieces and nephews.

EDWARD E. SHAPLEIGH, M.D.

1868-1959

Edward E. Shapleigh, M.D., of Kittery, died April 27, 1959.

Dr. Shapleigh was born in Kittery, Maine on March 3, 1868, the son of Dennis M. and Annie E. Peirce Shapleigh. He was educated in Kittery public schools and Exeter Academy. He graduated from Bowdoin Medical School in 1890. Dr. Shapleigh married L. Mabelle Humphreys who is now deceased.

After practicing in North Conway, New Hampshire from

1890 until 1891, Dr. Shapleigh returned to Kittery where he practiced medicine for over 50 years.

Dr. Shapleigh was a member of the York County Medical Society, the Maine Medical Association and the American Medical Association. His county medical society and the Maine Medical Association recognized his many years of service at the annual session in 1940 when he was made an honorary member and received the Association's 50-year medal. He was honored again in 1950 with a 60-year pin.

ALBERT W. PLUMMER, M.D.

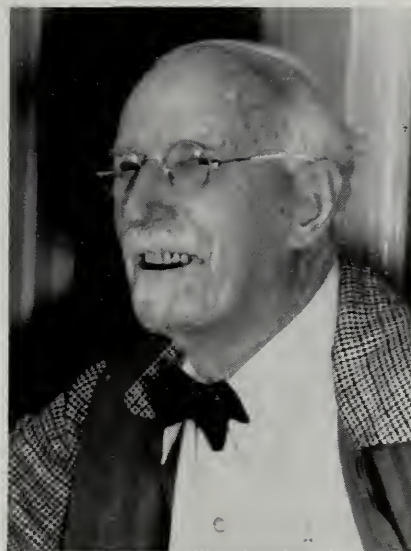
1869-1959

Albert W. Plummer, M.D., of Lisbon Falls, died at the age of 90 on May 1, 1959.

Dr. Plummer was born on January 25, 1869, in Lisbon Falls, the son of Charles Bean Plummer and Abbie Jane Taylor. He attended Lisbon Falls schools and was graduated from Bowdoin Medical School in 1894. Dr. Plummer returned to Lisbon Falls in 1906 after first practicing medicine in Baltimore, Maryland and then Oakland, Maine from 1895 to 1903. He practiced medicine for 65 years and attended patients through 1958. He was married to the former Caroline Stetson of Lewiston who died in 1954.

Called "one of the last of the old country doctors," Dr. Plummer was a member and past president of the Androscoggin County Medical Society and also served several years as this society's delegate to the Maine Medical Association House of Delegates, during which time he initiated many interesting discussions. He became an honorary member of his society and the Maine Medical Association in 1944, received his 55-year pin in 1949 and a 60-year pin in 1954. He was also a member of the American Medical Association.

Dr. Plummer served three terms in the House of Representatives of the State of Maine Legislature from 1911 to 1913 and in 1915. He was a member of the Ancient York Lodge, AF & AM, the Order of the Eastern Star, and the Knights of Pythias.



Surviving Dr. Plummer are a son, Albert S. Plummer, Lisbon Falls; a daughter, Mrs. Evelyn Litchfield, Auburn; three grandchildren and three great-grandchildren.

CLARENCE R. O'CROWLEY, M.D.

1880-1959

Clarence R. O'Crowley, M.D., internationally-known specialist in the treatment of nervous diseases, died March 28, 1959. The veteran neurologist came to Christmas Cove, Maine five years ago from Newark, New Jersey when he retired from practice.

Born in Newark on May 8, 1880, he was the son of Richard J. and Sara Rutherford O'Crowley. He was graduated from the College of Physicians and Surgeons, New York City, in 1904.

Dr. O'Crowley served as a corporal in the Spanish-American War at the age of 18 and as a captain in the Medical Corps in World War I. He was an instructor in urology at the New York Postgraduate School and Hospital from 1905 to 1920 and an assistant professor of urology in the Graduate School of the University of Pennsylvania for 22 years.

Dr. O'Crowley was consulting neurologist for 20 hospitals. Among them are the Newark City Hospital, the Presbyterian Hospital and the Clara Maass Hospital, all of Newark, New Jersey; the Veteran's Hospital, East Orange, New Jersey, and the Miles Memorial Hospital, Damariscotta. In medical practice for 50 years, he specialized in neurology for 45 and was an officer and member of many national and international professional groups. He was past president of the American

Neurological Association, the American Association of Genitourinary Surgeons, the New York Neurological Society, the Essex County Pathological Society, the Anatomical Society and the Society of Surgeons of New Jersey.

He became an honorary member of the Lincoln-Sagadahoc County Medical Society and the Maine Medical Association in 1955. Before he retired and came to Maine he was a member and past president of the Essex County Medical Society and a member of the New Jersey State Medical Society. In 1947, he received an award from the Academy of Medicine of Northern New Jersey of which he was a member. His other memberships included the International Neurological Society, the editorial board of the American Journal of Surgery, the editorial board of the Urologic and Cutaneous Review, Phi Sigma Kappa and the American Association of University Professors; a corresponding membership in the Berlin Neurological Association and the Societa, Piemontese di Chirurgia, Turin, Italy. Dr. O'Crowley was also a member of the St. Patrick's Catholic Church, Damariscotta Mills.

Surviving him are his widow, Mrs. Violet Park O'Crowley, a son, Clarence R., Jr., Cranston, Rhode Island; two sisters, Miss Irene O'Crowley, Highlands, New Jersey and Mrs. H. C. Horsford, Point Pleasant, New Jersey, and two grandchildren,



ANSWERING QUESTIONS



Providing Medical Care For The Aged

In an address before the national Blue Shield Professional Relations Conference in Chicago on February 9, Dr. Louis M. Orr of Orlando, Florida, President-Elect of the American Medical Association, urged physicians to "recapture the pioneering spirit" by utilizing their Blue Shield Plans to solve the problem of providing prepaid medical care to our senior citizens.

"Medicine has done a fair job in the past" in meeting the health needs of our older citizens, Dr. Orr said. And it is now "preparing to set in motion a positive program for older citizens that will take into consideration . . . not only the health and physician needs, but their social, economic, occupational and psychological requirements." This, he pointed out, cannot be done by any huge federal spending program.

Dr. Orr called attention to the fact that proposed legislation of the Forand type would "completely alter the nature of the Social Security program," because for the first time, it would add personal services to a program that is now limited to cash benefits. "This new principle," he warned, "would open the door for evolution of a system of tax-paid health care for the entire nation. Indeed, it would establish the principle that provision of medical care for any segment of the population, or all of it, is a federal function."

Pointing out that more than 40% of the people over 65 are already covered by voluntary health insurance, and commending Blue Shield, Blue Cross and the insurance companies for their achievements in this field, nevertheless Dr. Orr said, "Let's not live on past accomplishments. Let's not have America's health team become a mutual admiration society in which each member periodically lauds the other fellow for his plans, his surveys, and his continuing studies of the aged problems. Our individual jobs are *to think* and *to create*, *to develop* programs and then to put our sound ideas into *action*."

"I am gratified," Dr. Orr said, "that Blue Shield has been one of the first to pledge its all-out cooperation in working with the medical profession to do an effective job in providing medical care for the aged, especially the lower income groups."

AUDITOR'S REPORT JOSEPH STILLMAN

CERTIFIED PUBLIC ACCOUNTANT

97A EXCHANGE STREET
PORTLAND, MAINE

June 8, 1959

Maine Medical Association
Brunswick
Maine

Gentlemen:

I have examined the accounting records of the Maine Medical Association for the fiscal year ended May 31, 1959 and all related data and information pertinent thereto. I have found the records to be in order and all funds properly accounted for.

In my opinion, the enclosed Exhibits, Balance Sheet, and Statement of Income and Expense, with supporting schedules, present the true financial condition of the Maine Medical Association as of May 31, 1959, and the results of its operation for the Fiscal Year then ended.

Yours truly,

JOSEPH STILLMAN

Exhibit A

MAINE MEDICAL ASSOCIATION

BALANCE SHEET

As at May 31, 1959

ASSETS

Cash on Hand and in Banks (Schedule IV)	\$53,833.26	
Accounts Receivable:		
Dues	\$ 1,003.00	
Advertising — Journal	5 981.48	6,984.48
Loans Receivable — Medical		
Students	2,000.00	
Securities (Schedule VIII)	19,145.55	
Furnishings and Equipment	2,509.69	
Accrued Interest Receivable	119.58	
Prepaid Expenses:		
Annual Session	\$ 401.92	
Insurance	60.23	
Postage and Mailing	5.88	468.03
Trust Fund Investments (Schedule II)	4,813.83	
Total Assets		\$ 89,874.42

LIABILITIES AND CAPITAL

Accounts Payable	\$ 1,671.71	
Due for Payroll Taxes and Taxes Withheld	370.26	
Deferred Income:		
Convention Exhibit Space	3,220.00	
Total Liabilities		5,261.97
Excess of Assets over Liabilities		\$84,612.45

CAPITAL AND FUNDS

Capital Accounts (Schedule I)	\$67,916.04	
Trust Funds (Schedule II)	4,813.83	
Other Funds (Schedule III)	11,882.58	
Total Capital and Funds		\$84,612.45

Exhibit B

MAINE MEDICAL ASSOCIATION

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED MAY 31, 1959

INCOME

Dues	\$38,233.00	
Journal (Schedule V)	32,314.49	
Annual Session (Exhibits)	3,530.00	
Investments (Schedule VI)	1,043.11	
Miscellaneous Income	84.37	
Total Income		\$ 75,204.97

EXPENSES

Administrative Expense of Office (Schedule VII)	\$24,697.80	
Journal (Schedule V)	25,342.73	
General:		
Annual Session	\$ 2,821.16	
*President's Expenses	1,444.29	
Councilor's Expenses	689.28	
Medical Advisory Committee (Legal Counsel)	1,000.00	
Other Committees	1,242.60	
Delegates New England Medical Societies	180.45	
Delegates American Medical Association	823.82	
New England Council Dues	100.00	
Woman's Auxiliary	325.00	
Fall Clinical Session	629.75	
Annual Rosters	245.00	9,501.35
Expenses not Budgeted:		
New York Blood Bank	\$ 200.00	
First International Conference — Mental Retardation	700.00	
New Constitution and By-Laws (Printing and Mailing)	330.50	1,230.50
Total Expenses		60,772.38

Net Income for the Period **\$ 14,432.59**

*President's expenses of \$444.29 represents expenses of previous year's president budgeted but not paid until the current year.

Schedule I

MAINE MEDICAL ASSOCIATION

CAPITAL ACCOUNT
FOR THE YEAR ENDED MAY 31, 1959

Balance June 1, 1958	\$ 63,002.74	
Additions to Capital:		
Net Income for the Year Ended May 31, 1959 (Exhibit B)	14,432.59	
Total	\$ 77,435.33	
Deductions from Capital:		
Increases in Other Funds (Schedule III):		
Special Projects Fund	\$ 43.11	
Legislative Counsel Fund	1,500.00	
Reserve Fund for Future Contingencies — (Including Retirement Benefits for Employees)	2,000.00	
Building Fund	6,000.00	\$ 9,543.11
Less: Decreases in Other Funds:		
American Medical Association Delegates	23.82	9,519.29
Balance May 31, 1959		\$ 67,916.04

Schedule II

MAINE MEDICAL ASSOCIATION

TRUST FUNDS AND TRUST FUND INVESTMENTS
MAY 31, 1959

Prince A. Morrow Trust:			
108 Shares American Agricultural Co. (Cost)	\$ 348.00		
Canal National Bank Savings Book No. 3905:			
Balance June 1, 1958	\$ 3,204.55		
Add: Dividends Received	162.00		
Interest on Savings	99.28	3,465.83	\$ 3,813.83
			\$ 3,813.83
Thayer Library Trust:			
Portland Terminal Company 4% First Mortgage 1961		1,000.00	
Total Trust Fund Investments			\$ 4,813.83
Prince A. Morrow Fund:			
Principal	\$ 554.94		
Income	3,258.89	\$ 3,813.83	
Thayer Library Fund:			
Principal		1,000.00	
Total Trust Funds			\$ 4,813.83

Schedule III

MAINE MEDICAL ASSOCIATION

SCHEDULE OF OTHER FUNDS
AS AT MAY 31, 1959

Special Projects Fund:		
Balance June 1, 1958	\$ 500.82	
Add: Income from Investments (Schedule VI)	1,043.11	\$ 1,543.93
Less: Loans to Medical Students	1,000.00	
Balance May 31, 1959		\$ 543.93
American Medical Association Delegates Fund:		
Balance June 1, 1958	\$ 503.07	

Add: Budget for Fiscal Year
Ended May 31, 1959 800.00 \$ 1,303.07

Less: Actual Expenditures
for the Year 823.82

Balance May 31, 1959		479.25
Legislative Counsel Fund:		
Balance June 1, 1958	\$ 1,359.40	
Add: Budget for Fiscal Year Ended May 31, 1959	1,500.00	2,859.40
Less: Actual Expenditures for the Year		00
Balance May 31, 1959		2,859.40
Reserve Fund for Future Contingencies:		
(Including Retirement Benefits for Employees)		
Contributions for Fiscal Year Ended May 31, 1959		2,000.00
Building Fund:		
Contributions for the Fiscal Year Ended May 31, 1959		6,000.00
Total Other Funds		\$ 11,882.58

Schedule IV

MAINE MEDICAL ASSOCIATION

SCHEDULE OF CASH RECEIPTS AND
DISBURSEMENTS

FOR THE YEAR ENDED MAY 31, 1959

Cash Balance June 1, 1958		\$ 43,500.48
Cash Received From:		
State Dues (Including Journal)	\$40,466.00	
Journal Advertising and Miscellaneous	29,227.78	
Exhibit Space Rentals	3,430.00	
Income from Investments	1,043.11	
Members for County and American Medical Association Dues	15,540.00	
Members for Group Insurance	33,747.72	
Miscellaneous, Transfers, etc.	960.41	
Employees for Withheld Taxes	3,297.80	
Total Cash Received		127,712.82
Total Cash		\$171,213.30
Cash Disbursements:		
Office Administrative:		
Salaries	\$18,637.00	
Travel	1,584.29	
Office Expense	3,961.22	\$24,182.51
Journal:		
Salaries	\$ 3,593.50	
Printing and Plates	19,919.54	
Office Expense	1,452.59	24,965.63
Employees Payroll Taxes		4,022.61
General:		
Annual Session	\$ 3,317.50	
President's Expenses	1,444.29	
Woman's Auxiliary	325.00	
Committees, Councilors, Delegates, etc.	5,241.40	
New York Blood Bank	200.00	
First International Conference — Mental Retardation	700.00	11,228.19
Counties and American Medical Association for Members' Dues		15,543.00
Group Insurance for Members		33,747.72
Loans to Medical Students		1,000.00
Purchase of Securities (For Reserve Fund)		2,000.00
Miscellaneous (Refunds, Trans- fers, etc.)		690.38
Total Cash Disbursements		117,380.04
Cash Balance May 31, 1959		\$ 53,833.26

Canal National Bank —	
Regular Checking Account	\$31,517.15
Canal National Bank —	
Special Checking Account AMA	138.70
Maine Savings Bank	
Book #7751	9,920.13
Canal National Bank —	
Savings Book # 12188	6,210.63
Cumberland Savings and Loan	
Association #671	6,046.65
<hr/>	
Total Cash in Banks May 31, 1959	\$ 53,833.26

Schedule V

MAINE MEDICAL ASSOCIATION

SCHEDULE OF JOURNAL INCOME AND EXPENSE
FOR THE YEAR ENDED MAY 31, 1959

INCOME	
Journal Portion of State Dues	\$ 1,407.00
Advertising:	
State Medical Journal —	
Advertising Bureau	\$29,953.01
Local Advertising	803.15
<hr/>	
Miscellaneous Income and Subscriptions	151.33
<hr/>	
Total Income	\$ 32,314.49
EXPENSES	
Salaries:	
Secretary-Treasurer	\$ 1,500.00
Stenographer	2,093.50
<hr/>	
Printing and Plates	20,102.41
Travel Expense	6.30
Office Expense:	
Office Supplies and Expense	\$ 237.67
Postage and Mailing	292.78
Rent	325.00
Telephone	239.16
Prizes	185.37
Payroll Taxes	195.69
Insurance	96.35
Dues and Subscriptions	68.50
<hr/>	
Total Expenses	\$25,342.73

Schedule VI

MAINE MEDICAL ASSOCIATION

SCHEDULE OF INCOME FROM INVESTMENTS
FOR THE YEAR ENDED MAY 31, 1959

Income From:	
Interest:	
United States Government Bonds	\$ 50.00
United States Treasury Bonds	110.00
Portland Terminal Company Bonds	150.00
Province of Nova Scotia Bonds	37.50
Jacksonville Gas Corporation Bonds	40.00
Maine Savings Bank	119.12
Canal National Bank	124.09
Cumberland Savings and Loan Association	46.65
<hr/>	
Dividends:	
Central Maine Power Co. — Preferred	\$ 42.00
Consolidated Edison Co. of New York — Preferred	50.00

The Chase Manhattan Bank	74.40	
First National Bank of Boston	72.60	
Morgan Guaranty Trust Co. of New York	72.00	
National Union Fire Insurance Co. of Pittsburgh, Pa.	46.00	
Stockton, Whatley, Davin & Co.	8.75	365.75
<hr/>		
Total Income from Investments		\$ 1,043.11

Schedule VII

MAINE MEDICAL ASSOCIATION

SCHEDULE OF ADMINISTRATIVE EXPENSE OF OFFICE
FOR THE YEAR ENDED MAY 31, 1959

Salaries	
Executive Director	\$10,000.00
Secretary-Treasurer	3,000.00
Stenographers	5,637.00
<hr/>	
Travel Expense	1,518.47
Office Expense:	
Rent	\$ 325.00
Stationery, Supplies and Postage	1,540.88
Telephone	748.19
Auditing	390.00
Payroll Taxes	566.75
Dues, Subscriptions and Periodicals	200.10
Miscellaneous Expenses	165.30
<hr/>	
Equipment	606.11
<hr/>	
Total Expenses	\$ 24,697.80

Schedule VIII

MAINE MEDICAL ASSOCIATION

SCHEDULE OF SECURITIES
MAY 31, 1959

	Face	Cost
Bonds:		
United States Government Bonds, Series G — Due March 1, 1961	\$ 2,000.00	\$ 2,000.00
United States Treasury Bonds, Due September 15, 1961	4,000.00	3,914.59
Portland Terminal Co. — 5% First Mortgage 1961	3,000.00	3,045.00
Province of Nova Scotia — 3½% 1971	1,000.00	995.00
Jacksonville Gas Corporation — 4% First Mortgage 1969	1,000.00	1,025.00
Stocks:		
12 Shares Central Maine Power Co. — 3½% Preferred \$100 par		948.03
10 Shares Consolidated Edison Co. of New York, Inc. Cumulative Preferred, no par value		1,090.00
22 Shares First National Bank of Boston		1,049.36
18 Shares Morgan Guaranty Trust Co. of New York \$25 par		990.00
31 Shares The Chase Manhattan Bank		1,028.10
23 Shares National Union Fire Insurance Co. of Pittsburgh, Pa.		1,000.50
20 Shares Telfair Stockton & Company, Inc. Common \$4 par		60.00
4 Shares Stockton, Whatley, Davin & Co.		00
2 Shares Prudence Bond Corporation		00
136.778 Shares Massachusetts Investors Trust (Cumulative Investment Program)		2,000.00
<hr/>		
Total Securities		\$ 19,145.55

ACROSS THE DESK — *Continued from page 216*

try range as high as 3,000 a year, but the death rate is low — perhaps 10 or 20 a year.

At least 35 species or subspecies of poisonous snakes are known in the United States. Most of these are pit vipers or Crotalidae, which include the many species of rattlers, the copperhead and the cottonmouth or water moccasin. The coral snake, found in the southern states, is related to the cobra and is not a pit viper.

The Crotalidae are generally nocturnal in their habits and are dangerous on land or water. They are not aggressive and strike usually only for food or in self-defense.

A number of factors affect the seriousness of a snake bite, the doctors said. Very young and very old persons are more susceptible to serious aftermath. A bite is less dangerous on an extremity than one near a vital organ.

The earlier treatment is started, the more effective it will be, they noted. Since most bites occur far from a doctor's office, the victim himself must apply the first aid. If he remains calm, he should have little trouble, they said.

The first step is usually the application of a tourniquet. The objective is to close off the superficial lymphatics to lessen the spread of the venom.

Incision and suction at the bite site is used by many persons to remove large quantities of venom. If it is used, the incision need be made only to the depth of the subcutaneous tissues. As swelling extends beyond the site, short incisions may be made at the edge of the advancing swelling and suction applied over the incisions.

While many persons have survived without the use of antivenom, it should be given by a physician whenever there is any reason to believe that the bite is serious. The amount given may vary — a small person requires a large dose because the venom, distributed in a small volume, is less dilute.

The authors noted that snake bite is always a medical emergency and every victim should be hospitalized. The effects of snake bite may include blood coagulation difficulties, internal hemorrhage, vomiting, shock, and muscular twitching. Generally the patient is thought to be out of danger if he survives the first 48 hours.

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LEDERLE LABORATORIES, a Division of
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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, July, 1959

Number 7

A Survey Of 102 Patients With Bronchogenic Carcinoma At The Togus Veterans Administration Center

PETER F. LANSING, M.D.*

Bronchogenic carcinoma has become the most common cause of death from cancer at the Togus Veterans Hospital. Throughout the country there has been a steadily rising epidemic of bronchogenic carcinoma. We were interested in determining how our patients compared with those seen in other parts of the country. What were their smoking habits; their duration of illness; their cell types; how many had metastases; how did we treat them; how long did they survive; and how could we improve our diagnostic approach and therapeutic efforts. We were surprised to find a relatively short duration of illness and a high incidence of metastases in most of our patients. Our therapeutic efforts proved quite futile except for those patients in whom pneumonectomy was possible. We had only one patient who survived five years.

MATERIAL

One hundred and two charts with a discharge diagnosis of bronchogenic carcinoma were studied. These patients were hospitalized between June 1948 and February 1957. Their charts were evaluated by means of a survey sheet which was then analyzed by the IBM machine. The major proportion of our patients were evaluated on the Medical Service and then were referred to the Surgical Service if lung surgery was indicated. A few of the patients were diagnosed at autopsy alone.

RESULTS

Age At Time of Admission:

The average age was 60 years. The average age of patients undergoing thoracotomy was 59 years. This was in contrast to others¹ who noted an average age of 54.8 years at time of thoracotomy. Our age ranges are surveyed in Table No. 1.

TABLE I

AGE AT TIME OF ADMISSION		
<i>Age Range</i>	<i>Cases</i>	<i>Per Cent of Entire Group</i>
30 to 39.9	1	1. per cent
40 to 49.9	3	3. per cent
50 to 59.9	50	49. per cent
60 to 69.9	44	43. per cent
70 to 80	3	3. per cent
More than 80	1	1. per cent

Symptoms:

The majority of patients noted symptoms for less than 3 months prior to hospitalization at Togus. The symptoms of cough, weight loss, hemoptysis and chest pain were evaluated separately. Cough was present in 89 patients (87.2 per cent); weight loss in 55 patients (53.9 per cent); hemoptysis in 35 patients (34.3 per cent); chest pain in 60 patients (58.8 per cent). Chronic pulmonary disease such as chronic bronchitis and pulmonary emphysema was present in 50 patients (49 per

*From the Veterans Administration Center, Togus, Maine.

cent of the entire group). Pleural effusion was present in 12 patients. Tumor cells were found on thoracentesis in 7 patients. Duration of symptoms prior to hospitalization is reviewed in Table No. II.

TABLE II

DURATION OF SYMPTOMS PRIOR TO HOSPITALIZATION		
	Cases	Per Cent of Entire Group
0 to 2½ months	42	41.2 per cent
3 months to 5½ months	25	24.6 per cent
6 months to 11½ months	20	19.6 per cent
1 year to 1 year and 5½ months	6	5.9 per cent
1½ years to 1 year and 11½ months	2	1.9 per cent
2 years to 3 years	2	1.9 per cent
Not noted in chart	5	4.9 per cent

Smoking Habits:

In 81 patients the quantity of cigarette smoking was noted. The largest percentage smoked between one to two packs of cigarettes a day for 30 to 50 years. 10.8 per cent of the entire group of 102 patients smoked pipes; 2.9 per cent smoked cigars. Pipe and cigar smoking was not evaluated for quantity. Smoking habits and duration of smoking are reviewed in Tables Nos. III and IV.

TABLE III

SMOKING HABITS		
	Cases	Per Cent of Those Who Smoked
Packs of Cigarettes Per Day		
0 packs	1	1.2 per cent
½ pack or less	6	7.4 per cent
½ packs to less than ¾ pack	5	6.2 per cent
¾ pack to less than 1 pack	5	6.2 per cent
1 pack to less than 2 packs	51	63. per cent
2 packs to less than 3 packs	10	12.3 per cent
3 packs	2	2.5 per cent
More than 3 packs	1	1.2 per cent

TABLE IV

DURATION OF SMOKING		
	Cases	Percentage of Those In Whom Duration of Smoking Was Evaluated
Years		
0 to less than 10 years	2	4.8 per cent
10 to 19 years	4	9.5 per cent
20 to 29 years	6	14.2 per cent
30 to 49 years	24	57.2 per cent
50 years	1	2.4 per cent
More than 50 years	5	11.9 per cent
Not noted in chart	60	58.8 per cent of entire group of 102 patients

Admission Diagnosis:

In 65 patients (63.7 per cent) an initial admission diagnosis of bronchogenic carcinoma was made. No lung diagnosis was made in 13 patients (12.7 per cent). There was an impression of chronic bronchitis and pulmonary emphysema as the admitting diagnosis in six patients (5.9 per cent). Tuberculosis was the initial impression in six patients (5.9 per cent). Lung abscess and pneumonia accounted for the initial impression in five patients (4.9 per cent). There was an initial impression of metastatic disease of the lung in one patient.

Metastases:

Metastases to other organs at the time of initial diagnostic evaluation were suspected in 10 patients (9.8 per cent) and definitely diagnosed in 27 patients (26.5 per cent). Metastases were present but missed in five patients (4.9 per cent). Metastases developed during the course of illness in 33 patients (32.4 per cent). They were present but missed in an additional three patients (2.9 per cent). Jaundice was present during the course of illness in five patients (4.9 per cent).

DIAGNOSTIC STUDIES

X-Ray:

Chest x-rays revealed a predominance of lesions in the right upper lung (15 patients), right hilum (9 patients), left upper lung (13 patients), left lower lung (11 patients), left hilum (12 patients). There were no bilateral lesions in this series.

Bronchoscopy:

Bronchoscopy was undertaken in 76 patients (74.5 per cent of the entire group). In those who were bronchoscoped gross tumor was diagnosed in 30 patients (39.5 per cent). No tumor was found in 29 patients (38.1 per cent). Bronchoscopy was suspicious of tumor in seven patients (9.2 per cent). Narrowing or inflammation was found in 10 patients (13.2 per cent). These figures were similar to those of Kaunitz.² Tumor cells of Grade IV Papanicalaou or greater were found at bronchoscopy in 15 patients (19.8 per cent).

Sputa:

In 40 patients the sputa were examined for tumor cells. In 12 patients (30 per cent) positive results were obtained. In one patient the sputum was suggestive of tumor cells.

Lymph Node Biopsy:

The standard scalene lymph node biopsy or axillary lymph node biopsy was done in 25 patients and was positive for tumor in 11 patients ((44.1 per cent).

THERAPY

Surgery:

All patients not considered inoperable because of metastases, poor pulmonary function, severe heart disease, very advanced age and severe debility were subjected to thoracotomy. Forty-one patients (40.2 per

cent of the entire group) had thoracotomy. Of these pneumonectomy was done in 15 patients (36.6 per cent), lobectomy in three patients (7.3 per cent) and exploratory thoracotomy alone in 14 patients (58.4 per cent). Tumor removal at thoracotomy including all lymph nodes was considered to be complete in nine patients (22 per cent).

Carcinoma was considered to be originally inoperable in 45 patients (44.1 per cent of the entire group). One patient refused surgery. In seven patients (6.8 per cent) surgery was considered inadvisable because of advanced age, severe heart disease and severe debility. In eight patients no surgery was undertaken because of poor pulmonary function.

Nitrogen Mustard:

As a rule nitrogen mustard was given for advanced generalized carcinomatosis. Nine patients received one course of nitrogen mustard. A course consisted of an injection of 1/10 of a milligram of nitrogen mustard per kilogram for five days. There were five patients with epidermoid carcinoma and four patients with anaplastic carcinoma. All patients had metastatic disease either at the time of initial diagnostic evaluation or during the course of their disease.

X-Ray:

The policy regarding x-ray therapy varied. X-ray therapy was administered in the majority for palliation. One patient received a cancerocidal dose.

Two patients received less than 3000 r units. Six patients received between 3000 to 5000 r units. One patient received between 5000 to 6000 r units. Five patients had epidermoid carcinoma, five had anaplastic carcinoma and one patient had adenocarcinoma. In two patients the type of histology present was unknown. Metastatic disease was present in four patients at the

time of diagnostic evaluation. Six patients showed evidence of metastatic disease later.

Combined Use of Nitrogen Mustard and X-ray Therapy:

The use of both nitrogen mustard and x-ray therapy is now commonly accepted for palliation, especially in patients with the superior vena cava compression syndrome. Nitrogen mustard produces rapid relief of swelling and decrease in symptoms in more than 80 per cent of patients. It does not cause edema in the tumor which may follow the initiation of x-ray therapy alone. The response to nitrogen mustard rarely persists for more than two to eight weeks and local x-ray therapy then is desirable.³

Of our three patients treated with both nitrogen mustard and x-ray therapy one patient had a superior vena cava compression syndrome. Two patients received between 3000 to 5000 r units. Two patients received two and one patient received one course of nitrogen mustard.

Survival:

Survival from the first day of hospitalization was less than three months for 52 patients (51 per cent of the entire group). The two-year survival rate for the 15 patients who underwent pneumonectomy was 42.9 per cent. Among the group who received x-ray therapy there were two patients who survived two years. Only one of the untreated patients survived two years.

One patient survived five years. He is presumably still living. He had a pneumonectomy with incomplete removal of hilar lymph nodes.

At the conclusion of the survey in February 1957 there were still four living survivors (3.9 per cent of the entire group). Only one had survived five years. Survival was unknown in six patients (5.9 per cent).

Analysis of survival for the different therapy groups is reviewed in Table No. V.

TABLE V

BREAKDOWN OF SURVIVAL FOR THE DIFFERENT THERAPY GROUPS			
	<i>Patients Analyzed</i>	<i>Average Survival Duration</i>	<i>Range</i>
Thoracotomy	41	13.7 months	+60 months to less than 1 month
Pneumonectomy	15	24.2 months	+60 months to less than 1 month
Lobectomy	3	7. months	15 months to less than 1 month
X-ray			
From 1st hospital day	13	9.5 months	30 months to less than 1 month
From beginning of therapy	9	2.8 months	8 months to less than 1 month
Nitrogen Mustard	8	3. months	7.5 months to less than 1 month
X-ray and Nitrogen Mustard	3	8. months	15 months to less than 1 month
Untreated Patients	56	4.2 months	48 months to less than 1 month
SURVIVAL ACCORDING TO HISTOLOGICAL TYPE* — ENTIRE GROUP			
Epidermoid Carcinoma	43	11.9 months	+60 months to less than 1 month
Anaplastic Carcinoma	37	5.1 months	48 months to less than 1 month
Adenocarcinoma	4	4.5 months	3 to 6 months
Alveolar Carcinoma	2	4.5 months	8 months to 4 months

*Survival periods unknown in three patients with epidermoid carcinoma and two patients with anaplastic carcinoma.

PATHOLOGY AND AUTOPSY FINDINGS

Epidermoid carcinoma was present in 46 patients (45.1 per cent). Anaplastic carcinoma was present in 39 patients (38.3 per cent). Adenocarcinoma was present in four patients (3.9 per cent). Alveolar carcinoma was present in two patients (1.9 per cent).

Autopsy was undertaken in 58 patients. The highest number of metastases were found in the liver and adrenals. Autopsy findings are reviewed in Table No. VI.

TABLE VI

AUTOPSY FINDINGS		
<i>Location of Tumor</i>	<i>No. of Patients</i>	<i>Percentage of Autopsy Patients</i>
Localized to lung	8	13.8 per cent
Thoracic cavity	5	8.6 per cent
Liver	26	44.9 per cent
Adrenals	25	43.1 per cent
Bone	14	24.2 per cent
Kidney	11	18.9 per cent
Brain	7	12.0 per cent
Pancreas	5	8.6 per cent
Heart	6	10.3 per cent
Other unrecorded areas	32	55.2 per cent

DISCUSSION

Clinical diagnosis of carcinoma of the lung should be more easily arrived at than clinical diagnosis of most other carcinomas, yet there continues to be a long delay between the onset of symptoms and the time the patient is presented to the thoracic surgeon. The importance of early diagnosis is emphasized by such studies as that of Carlisle, McDonald and Harrington who noted that 63.2 per cent of patients survived five years after resection when the local lymph nodes showed no evidence of carcinoma in routine microscopic section whereas in those whose nodes contained tumor the 5-year survival rate was only 25 per cent.³

In a report of a series of 704 patients by Jones, Robinson and Meyer between 1943 and 1953 there was no significant improvement in the resectability rate which remained in the vicinity of 20 per cent. Any improvement which had occurred through increased awareness of the disease was offset by delays in diagnosis incident to the use of antibiotic drugs.¹

Mayer and Maier advise that a period of study which included physical examination, x-ray, bronchoscopy, bronchial washings and sputa should not exceed three to four weeks prior to exploratory thoracotomy.³

Kaunitz found that less than 50 per cent of carcinoma of the lung had a positive bronchoscopic biopsy. Peripheral lesions were especially difficult to evaluate bronchoscopically.²

In the incipient phase cytological diagnosis can occasionally be made through repeated studies of sputa and bronchial washings. Symptoms and clinical findings are especially too uncertain at this phase. When the suspected symptoms are persistent and there is some cor-

roboration by x-ray but not by bronchoscopic or cytological studies diagnosis can only be made by exploratory thoracotomy.³

The risk of exploratory thoracotomy is usually justified. A mortality rate as low as .7 per cent was noted in a series by Jones, Robinson and Meyer.¹ Mortality rates of 2.5 per cent in localized resection and 14 per cent for palliative resections were found by Overholt and Bougas.⁵

Pneumonectomy is usually considered to be the only sure way of eradicating carcinoma of the lung. In recent years lobectomy has found favor in special circumstances such as peripheral small isolated tumor nodules with no evidence of local or hilar lymph node involvement, patients with low pulmonary reserve, when palliation is desired, if tumor must be left behind in vertebra, great vessels, heart or contralateral mediastinum.⁵

The factors relating to long-term survival were studied by Overholt and Bougas.⁵ Factors such as age, sex, symptoms such as cough, hemoptysis, chest pain, respiratory infections, weight loss, malaise, fatigue, anorexia, tumor cells from the lung, histological patterns, bore no distinct relationship to five-year survival. Common features favoring survival were: (1) Less delay from initial manifestation to diagnosis (6.7 months of cases who survived five years and 11.2 months in all others); (2) Chest x-ray abnormality; (3) Exploratory thoracotomy; and (4) Surgical excision.⁵

Gibbon, Templeton and Kneeland⁴ felt that the single most important factor was related to extension of the tumor beyond the lung. Twenty-three (35 per cent of 65 patients) with tumor confined to the lung survived five years; only seven (9 per cent of the 80) with extension of the tumor beyond the lung survived five years.

Kirkland et. al.⁷ considered that the histological type of a cancer was the most important prognostic feature. In our own group survival of patients with epidermoid carcinoma was twice as long as those with anaplastic carcinoma.

Survival in our own group was considered to be so poor because of the high incidence of metastases present not only at the time of diagnostic work-up but also developing during the short course of illness (78 patients, 76.5 per cent).

The survival rate of our untreated group was 4.2 months, the range of survival was quite large, from 48 months to less than one month. The short survival of the nitrogen mustard treated group was considered to be of no valid significance (3. months mean survival). Likewise, the longer survival of the x-ray group (9.5 months) was considered to be coincidental, especially after it was noted that the survival after the x-ray therapy was only 2.8 months. In a selected group of patients treated with irradiation in England⁶ a two-year survival rate of 55.6 per cent was obtained. However, the lesions treated were localized and so situated that surgery could have been undertaken and there was no

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Disseminated Lupus Erythematosus Versus Drug Reaction

Report Of A Case Receiving Chlorpromazine*

ROGER G. METCALF, M.D.,** ANDREW KUNA, Ph.D.,†
and DAMIEN MACCARRON, M.D.‡

INTRODUCTION

"From the beginning of recorded time man has endeavored to interpret the manifestations of disordered function. The concepts reflect the state of human knowledge of a given period. . . . By observation and experimentation, medicine must strive to fill the gaps in a comprehensive understanding of the natural history of disease. . . . With Charcot we may say, 'Disease is from of old and nothing about it has changed. It is we who change as we learn to recognize what was formerly imperceptible.'"¹

The case to be presented serves to emphasize the "comprehensive understanding" of the natural history of an old disease² as described by observing clinicians^{3,4,5,6,7,8,9} and augmented by associates in the basic sciences.^{9,10,11,12,13,14,41} It illustrates the question of whether or not the findings of purpura, local edema, mild thrombocytopenia, mild hypoprothrombinemia and pseudo L.E. cell or advanced Tart cell formation are in fact due to Chlorpromazine sensitivity,^{11,15,16} or instead have been brought to the surface so to speak by the drug in a patient already suffering from Disseminated Lupus Erythematosus.^{6,7,9}

CASE REPORT

A 34-year-old male schizophrenic patient was observed at Northport Veterans Administration Hospital. Between 1947 and 1957 he had several episodes of vomiting, flushing and tachycardia. Sinus tachycardia to 150 was described several times and not explained. Seborrheic dermatitis and psoriasis were diagnosed on separate occasions. In 1954 two bullae developed on his right leg and one required four months to heal, broke down again, and finally healed leaving a thin, brown scar. At one time an unexplained ecchymosis appeared on the lobe of one ear.

These observations could, of course, be part of the picture of Lupus Erythematosus.

On March 5, 1957 he developed swollen, red areas about each eye. It was thought that he had been struck in the eyes. He was sent to another ward. He insisted on sitting in the washbowl and on April 23, 1957 he developed an 8 cm. ecchymosis on the left thigh. He was transferred to the Medical Service.

An initial examination was negative except for the bruise, psoriasis of the scalp and mental regression. Two days later he developed a 6 cm. wide erythematous, tender, band-like swelling about the mid-section of both feet. There were multiple punctate petechiae on the dorsum of each foot conforming to the swollen areas. There was no elevation in temperature. Chlorpromazine, which the patient had been taking in 300 mgm. doses daily for nine months, was promptly discontinued. Four days later there were bruises noted on each arm at the level of the usual tourniquet application; the antecubital spaces exhibited an ecchymosis on the right and a petechial shower on the left. It was during this time that the laboratory studies revealed a slight prolongation of the prothrombin time; 22 and 17 seconds on four occasions with control values of 14 and 15 seconds. This was not altered by intramuscular Vitamin K₁ oxide. Platelet counts were slightly reduced to 180,000 and 148,000. Bleeding time and coagulation time were normal. Hemogram, sedimentation rate, liver function tests, urine and serology were negative. At this time the first tests for L.E. cells were done after the Method of Lee and several cells were found which at first were thought to be L.E. cells. On the following day, however, the L.E. preparation revealed "Tart cells" and pseudo rosettes in all stages of nucleophagocytosis (Figure I). It was, therefore, believed that we had demonstrated a pseudo L.E. cell and not true L.E. cells.

Through the month of May 1957 prothrombin times remained between 17 and 20 seconds, platelet counts rose to 190,000, 210,000 and 260,000 respectively. The direct Coombs test was negative. L.E. preparations were negative. The patient was briefly observed again a year later. He was still deteriorated mentally. The hemogram

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**Formerly Chief, Medical Service, VAH, Northport, New York; presently Medical Service, Togus, Maine.

†Biochemist, VAH, Northport, New York.

‡Medical Service, VAH, Northport, New York.

and urine were negative. The prothrombin time was normal, the sedimentation rate was normal, a single platelet count was 150,000. L.E. preparations at this time revealed numerous tart cells, none of which were in the advanced stages.

DISCUSSION

The clinical and hematological reactions exhibited by this patient have rarely been mentioned in connection with Chlorpromazine administration.^{11,17,18,19} All of the clinical and hematological features which we have noted have been well documented as forming part of the broad and varied clinical spectrum of Disseminated Lupus Erythematosus.^{2,6,7,8,9,20}

Thus it is implied that there is a possibility that the patient has Disseminated Lupus Erythematosus with its propensity to cause increased hypersensitivity to drugs.^{6,7,11}

On the other hand, this may have been a self limited hypersensitivity response to Chlorpromazine.^{11,15,17} In either instance Berk's warning of the iatrogenic propensities of modern therapeutic agents should not be ignored.

Two features demonstrated by this patient deserve additional comment even though they were not completely worked through to conclusion. One is the slightly prolonged prothrombin time which did not show a response to Vitamin K₁ oxide administration. A few cases with circulating anticoagulants have been described in Lupus Erythematosus. Usually there is an associated prolongation of the clotting time and poor prothrombin consumption. These anticoagulants are thought to be specific, possibly due to a substance that interferes with the conversion of prothrombin to thrombin.^{22,23,24,25} Several instances of atypical circulating anticoagulants have been reported.¹³ Dubois has described a prolonged plasma prothrombin time unassociated with an anticoagulant.⁶ Idiopathic Hypoprothrombinemia associated with hemorrhagic diathesis influenced by Vitamin K has been reported in cases which probably had Disseminated Lupus Erythematosus.²⁶ Freund did not find the prothrombin time elevated in 260 psychiatric patients receiving Chlorpromazine under experimental conditions.³⁰

The second feature is the transient appearance of a nucleophagocytic polymorphonuclear cell in all stages of activity from the early ingestion of cells to the final digestion of the cell nucleus to produce a pseudo-L.E. cell,^{9,10} or an advanced "Tart cell."^{10,11} The true L.E. phenomenon — especially in earlier papers — has undoubtedly been confused with this type of nucleophagocytosis. The first cells which were discovered in our patient were mistaken for L.E. cells and their true identity was later recognized by relation with the whole cell population.¹⁰ Special staining techniques⁹ were not done. The cell type was easily detected on morphologic grounds alone. Figure I (a-g)

It is well known that drug reactions produce "Tart

cells" although we have found only one report of this cell described in association with Chlorpromazine administration.¹¹ "Tart cells" and pseudo-L.E. cells are found in cases of Disseminated Lupus, and when most of them are of the pseudo-L.E. type (advanced "Tart cell") Weiss and Hargrave feel that the likelihood of Disseminated Lupus Erythematosus may be more insistent.^{10,11} It is not uncommon for the L.E. cell to disappear suddenly — just as the patient's objective clinical symptoms are apt to do.²⁷ In the same manner the L.E. phenomenon may return with or without an exogenous stimulus. Dubois emphasizes the desirability of doing a battery of L.E. tests at frequent intervals as a means of establishing a definite diagnosis.³

Since the diagnosis for our patient is in question a program of frequent observations for L. E. phenomenon would be desirable — especially so because the appearance of a definite L.E. cell, if necessary using special stains and phase microscopy, is almost pathognomonic of Disseminated Lupus Erythematosus.^{7,6,9,11,20} The lupus globulin-nucleoprotein reaction recently described by Friou should be of great help in the future.⁴¹

In addition to the hematological and clinical observations which bear continuous observation, we must be alert for possible derangements of the globulins^{9,7} and to consider them in relation to autoimmune states.¹⁴ Dameshek believes Lupus Erythematosus is the autoimmune disorder par excellence.²⁸

It is both humbling and refreshing to quote from a paper by William Osler, "On the Visceral Complications of Erythema Exudativum Multiforme," published in the American Journal of the Medical Sciences, December, 1895.²

"By exudative erythema is understood a disease of unknown etiology with polymorphic skin lesions — hyperemia, edema, and hemorrhage — arthritis occasionally, and a variable number of visceral manifestations, of which the most important are gastro-intestinal crises, endocarditis, pericarditis, acute nephritis, and hemorrhage from the mucous surfaces. Recurrence is a special feature of the disease, and attacks may come on month after month, or even throughout a long period of years. Variability in the skin lesions is the rule, and a case may present in one attack the features of an angio-neurotic edema, in a second of a multiform or nodose erythema, and in a third those of peliosis rheumatica. The attacks may not be characterized by skin manifestations; the visceral symptoms alone may be present and to the outward view the patient may have no indications whatever of erythema exudativum." . . . "Ever since Willan (1808) described a case of purpura associated with violent vomiting, excruciating pains in the bowels, and anasarcaous swelling of the legs, thighs, and hands, cases have been reported with this remarkable symptom-complex."

Statistical studies have been done by a number of workers and the clinical course of Disseminated Lupus Erythematosus has been charted by able clinicians. Ob-

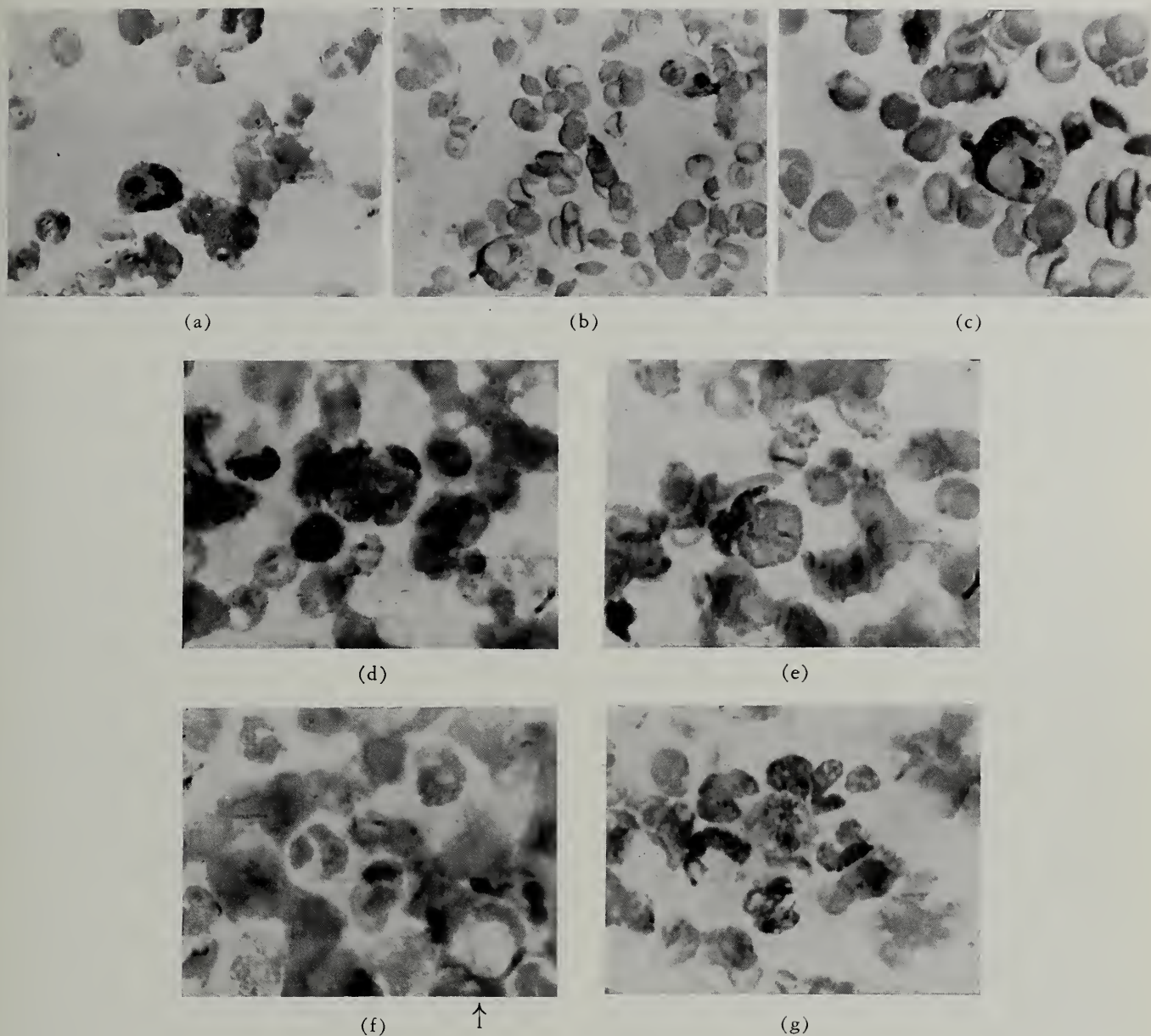


Figure I (a through g)

(a) Tart cell; (b) Tart cell and advancing tart cell or pseudo L.E. cell; (c) Pseudo L.E. cell; (d) Pseudo L.E. cell; (e) Pseudo L.E. cell; (f) Pseudo L.E. cell or advanced tart cell; (g) Rosette formation around a pseudo L.E. cell; a pseudo rosette. Proceeding from (a) through (f) note the granular nuclear disintegration. This is in contrast to the L.E. cell which has a globular "ground glass" mass compressing the nucleus. Granules are not present in the L.E. cell globular mass.

jective reactions to drugs and at times their relation to Disseminated Lupus Erythematosus are constantly being reported. Further elucidation of the pathogenesis of these states is certain to have far reaching implications in clinical medicine. Despite the fact that the laboratory investigators have already added much to our understanding, isolated or small groups of cases will continue to offer a fertile field for the laboratory investigator to use the many "tools" available for study of these phenomena under the direction of the inquiring clinician who will want to follow the advice of Huxley: "Sit down before a fact as a little child, be prepared to give

up every preconceived notion, follow humbly whatever and to whatsoever abysses nature leads or you shall learn nothing."*

CONCLUSION

A patient has been presented who in retrospect exhibited findings consistent with Disseminated Lupus Erythematosus over a period of ten years. While taking Chlorpromazine for a psychosis, he exhibited purpura,

*Huxley, A. quoted from Middleton, W. S.: *The Natural History of Disease Archives of Internal Medicine* 98:401, 1956.

local edema, mild thrombocytopenia, mild hypoprothrombinemia and pseudo-L.E. cell formation. The question is raised whether this is an isolated drug reaction or a part of the varied spectrum of Disseminated Lupus Erythematosus which may yet show itself more clearly.

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A Study Of Delirium Tremens With Review Of Cases

DONALD H. DANIELS, M.D. and ROBERT L. OHLER, M.D.*

There is widespread agreement that alcoholism is a social, economic and public health problem and medical journals contain increasingly frequent papers dealing with various phases of this whole matter. An estimate has been made that about 6 per cent of American men are problem drinkers and among these are an estimated 1¼ million with habitual drunkenness.¹ One investigator has stated that in the younger generation one in every 15 will become a candidate for habitual inebriation if present social customs and concepts of the use of alcoholic beverages continue and no measures are provided to prevent such deteriorating results. It seems almost inevitable that serious complications of chronic alcoholism are to be expected after several years of heavy drinking (10 or more) and thus the young alcoholic in the age 20 to 30 range who follows this course may unfortunately be slowly producing a physical and mental deterioration which may appear before he reaches the peak of his productive life's work.²

Currently it is considered better to attribute the majority of pathological changes in alcoholism to complications or results of malnutrition and not to any direct action of the drug itself. The chronic alcoholic patient in the long continued course of drinking inevitably develops various vitamin and nutritional deficiencies, chief among which are a lack of thiamine and other fractions of the B complex as well as protein (amino acids). Obviously there will be frequent complications from accidents and trauma which the alcoholic patient is notoriously prone to develop.

There are certain acute psychiatric syndromes which occur following excessive use of alcohol over a long time and which in general occur in proportion to the intensity of the drinking. Delirium tremens is the more serious of these and acute alcoholic hallucinosis is a lesser degree of the same underlying situation. Delirium tremens does not occur except in the course of severe alcoholism and it may occur during drinking, after cessation of drinking, or following abrupt withdrawal of the drug. Delirium tremens usually develops within a 24-hour period during which the patient shows generalized weakness and increasing tremors and characteristically exhibits a state of confusion and disorientation with memory disturbance and impairment of all mental functions. The patient experiences hallucinations which are often terrifying and his reactions are based upon fear

of these hallucinations. There is often fever, tachycardia, profuse perspiring, a general exhausting state of muscular tension and tremor. Convulsive seizures may occur. In an average attack the intensity of this disorder subsides after two to three days and the patient becomes relaxed. Additional complications of infection or injury may often be present and masked during the onset of the tremulous, delirious state and make care of the patient more difficult for that reason.

ETIOLOGY OF DELIRIUM TREMENS

There is a divided opinion as to whether withdrawal of alcohol from chronically intoxicated persons will precipitate delirium tremens. Bowman, Wortis and Keiser³ stated that few cases of delirium tremens occurred in the 10,000 annual alcoholic admissions at Bellevue Hospital in New York although alcohol was abruptly withdrawn from all these patients. One factor which interferes with the ability to make a definite conclusion on this matter is that these patients are usually given some type of sedative medication, most often paraldehyde, which may be equivalent to the effect of alcohol. Furthermore, it has been observed that a reduction in alcohol intake itself from the amount which has been taken (and thought to be excessive) may be sufficient to bring on delirium tremens. This mechanism would be similar to a sudden reduction of dosage in barbiturate addiction where convulsions or disoriented states may occur. Experimental study on delirium tremens was conducted by Isbell and associates⁴ in which volunteer subjects, all former morphine addicts, consumed large amounts of alcohol for periods up to 87 days, following which the alcohol was abruptly withdrawn. Results obtained indicated that withdrawal of alcohol from chronically intoxicated persons is at least one of the factors which will precipitate convulsions or delirium or both. All of the patients who drank for 48 days or over exhibited significant symptoms on withdrawal: all had tremor, weakness, perspiration, nausea, vomiting, diarrhoea, hyperreflexia, slight fever, elevated blood pressure, and insomnia; part of the group (1/3) showed convulsions, or hallucinations, or delirium. In the study by Victor and Adams⁵ of 266 patients with alcoholism at Massachusetts General Hospital it was found that seizures occurred in 12 per cent, delirium tremens in 5.3 per cent, acute alcoholic tremulousness in 35 per cent, and tremor and transitory hallucinosis in 11 per cent. Thus it appears that convulsions and frank delirium do not occur in each and every case, and this is logical since individual variation

*From the Medical Service, Veterans Administration Center, Togus, Maine.

is probably great from one patient to the next. In general, the greater the amount of alcohol and the longer the debauch, the more severe the abstinence syndrome would be expected to be. The data in their studies¹ supported their belief that a quart of whiskey represents about the maximum amount of alcohol that can be metabolized daily by an average man. The difference between high blood levels of alcohol and drunkenness and low blood levels and sobriety is quite small as long as alcohol is taken throughout the day so that if the alcoholic, for any reason, takes less than his regular amount then all the alcohol would be metabolized, blood alcohol concentration would decrease and alcohol abstinence symptoms would develop, even though he was drinking what was considered a large amount of alcohol.⁴ This would seem to offer some explanation of how delirium tremens may develop during active drinking.

MORBIDITY AND MORTALITY

As to the mortality of this complication, in a study by Figurelli² at the Medical Center of Jersey City in which 54 consecutive unselected patients were used (all had acute alcoholism with nearly half of these having active delirium tremens) there were five deaths (10 per cent mortality). All these occurred as a result of severe complications which included bronchopneumonia, cirrhosis of the liver, esophageal varices, hepatic coma and cardiac failure. This same author has made a second series of statistics⁶ on cases of delirium tremens when treated with a more recent therapy (Promazine) and has reported a reduction in mortality from the conventional 10 per cent to a low of 4.5 per cent representing six deaths in 143 cases. The morbidity or incidence of delirium tremens does not permit a clear percentage estimate as can be done in many other diseases. One factor affecting this is the fact that varying degrees of intensity of delirium tremens occur and it is at times difficult to draw a definite line as to where severe inebriation ends and delirium tremens begins. A full-fledged attack is clearly obvious and generally estimates of the occurrence of such episodes are of approximately 5 to 10 per cent.

THERAPY OF DELIRIUM TREMENS

General Procedures:

For some years now, the treatment of delirium tremens has been routine without any impressive changes or principles. The basic treatment plan^{7,9} has consisted of adequate sedation, fluid intake of up to 3000 cc. daily, and general measures of support such as digitalis, vitamins, calories rich and carbohydrate rich diets. Alcohol is not given further, even though the patient has observed that it has quieted his tremors previously; it also is uncommon for the patient to ask for alcohol at this stage although paraldehyde may be requested. Bed rest, crib sides, and restraints are used in almost every case. The latter device should be used as little as possible since patients tire themselves trying to get free from them. Paraldehyde has long been a valuable sedative, and seems to be peculiarly acceptable to the

alcoholic. Dosage is quite variable but in an average case 8 cc. can be given every 6 to 8 hours as needed, orally or rectally in an olive oil retention enema. If not tolerated by mouth, it can be given intramuscularly in a dosage of 4 cc. of the sterile preparation at similar intervals. If further drug therapy is necessary to control agitation or exhausting tremors a barbiturate preparation can be given, such as Sodium Amytal® in a dose of 0.25 Gm. intramuscularly and this can be repeated at 8-hour intervals as needed. Since the alcoholic patient is dehydrated and usually has some degree of acidosis, correction of these states is made by administering hypodermoclyses of normal sodium chloride solution, U.S.P. or use of 5 per cent dextrose in normal saline solution, as preferred to make up 2000 to 3000 cc. per 24 hours. To correct acidosis of severe degree, 500 cc. of 1/6 molar sodium lactate solution can be given intravenously. Vitamin therapy is necessary: thiamin hydrochloride, 50 to 100 mg. as well as nicotinamide, 100 mg. intravenously is needed. Use of a parenteral preparation such as vitamin B complex with vitamin C (Bejectal®) which can be given intramuscularly in a dose of 5 cc. daily is a practical method at the start until a multivitamin capsule can be taken orally. If the patient is bothered with gastric irritability use of a bland colloidal suspension of magnesium and aluminum hydroxides (Maalox®) is useful for relief of this distressing symptom.

If immediate stimulation is needed for shock-like states, or hypotension, Metaraminol Bitartrate (Aramine®) given in doses of 5 to 10 mg. intramuscularly is available for hypotensive states and repeated hourly, or as needed. The diet is important, since so often these patients are nauseated, vomiting, or unable to eat at all. Parenteral fluids of 5 per cent dextrose in normal sodium chloride solution or Protein Hydrolysate (Amigen®), can be used to make up the desired 3000 cc. per day intake. If the patient can eat, a bland diet of the simplest type is good, e.g. milk and eggnog on one or two hourly feedings and this is rapidly increased to full bland or regular diet in the next two or three days. An effective combination to hasten oxidation of alcohol remaining in the body is the intravenous administration of 100 cc. of 25 per cent glucose with 20 units of regular insulin and 100 mg. of thiamine. This can be given at the start and repeated in a few hours for two doses in the initial 24 hours. It usually is not indicated on the second day as most of the alcohol has been metabolized by then. The use of adrenocortical preparations is discussed in a following paragraph since there has been controversy about their value. The various details just outlined at this time are those which make up the standard or basic therapy which can be applied in all cases and which have been shown to be of definite value in the acute case of delirium tremens.

The Role of Corticosteroid Therapy:

In the past few years, there have occurred various trials and conclusions as to the usefulness of the adreno-

corticotrophic hormone (ACTH) and adrenocortical steroids (Cortisone) in cases of delirium tremens. The basis for their use apparently has been the resemblance of delirium tremens to manifestations of the "stress syndrome." It can be said that no general agreement as to a specific or dependable therapeutic result has been forthcoming. The weight of the evidence in published reports seems to favor the conclusion that these drugs do not offer any distinct advantage over the older and standard measures of sedation, vitamins, and supportive measures. An interesting study of this phase of therapy was conducted by Berman⁷ who attempted to test the efficacy of ACTH as well as the value of Aureomycin® Hydrochloride with the theory for the latter drug being that sterilizing of the intestinal tract might improve liver function and aid in the liver's work of detoxification of intestinal toxins. The results demonstrated that the group being given ACTH did not have even as fast improvement as the group treated with the older methods of sedation, and the conclusion was made that there was no indication for use of these hormones, at least in the average case. Similarly, the use of Aureomycin did not prove to offer any better results, or as good and hence, this theory was still unconfirmed in its value. Figurelli² has reported in a recent study of delirium tremens, that no striking or phenomenal benefits were found in the use of corticotropin, and that the drug was not given any more. Despite these opinions, it is likely that some form of corticosteroid therapy has been used as an adjunctive measure in severe or desperate cases of delirium tremens, and for the purpose of a general support to a failing circulatory or endocrine system when shock-like states begin to appear. Hydrocortisone has been used for this purpose.

Reserpine Therapy:

Since this form of treatment has currently been in use at this Hospital it seems worth a detailed consideration as to its comparative value in the treatment of delirium tremens. The shrub, *Rauwolfia Serpentina* has been found to contain some 14 alkaloids, of which Reserpine has been a fraction which has shown pronounced hypotensive and sedative properties. Avol and Vogel⁸ in studying the use of this drug in neurological disorders for tranquilizer purposes observed an impressive effectiveness in controlling acute hallucinatory episodes. This seemed particularly so in acute head injuries. Thereafter, these authors tried the drug in cases of acute delirium tremens. Their results were so satisfactory over the older methods of sedation that they felt the drug should be given further extensive trial and since the publication of their paper in 1955, undoubtedly this drug has been used more widely. In their investigation, observations were made on the control of the agitation and hallucinations, and general excitement; blood pressure readings were made before and during treatment. Their routine dosage plan was to give the drug intramuscularly in two equal doses of 2.5

mg. each about three hours apart. They observed that this usually caused the patient to become free of hallucinations in from 18 to 24 hours, although patients would begin to quiet down earlier than this, and if not so, a third 2.5 mg. would be given. After 24 hours if there were any lingering hallucinatory tendencies, another dose of Reserpine was given (2.5 mg.) and this seemed to clear up the state of delirium tremens. They have reported minimal trouble with side effects, and that any hypotensive effect was more marked in hypertensives but quite minimal in normotensives, where the average drop in blood pressure was 15 mm. systolic and 10 mm. diastolic.

Usage in this hospital has been somewhat similar in dosage plan with 2.5 mg. being given at the onset and repeated at short intervals of approximately three hours on a pro re nata (p.r.n.) basis for a total of up to 10 mg. in 24 hours. This is with the thought that 5 mg. or 7.5 mg. might be sufficient in the 24-hour period, but if not, then up to 10 mg. can be given. The intramuscular route is used. In the second 24 hours, a maintenance dosage of 2.5 mg. one to three times at 8 hour intervals is again used according to how drowsy or quieted the patient has become. The drug is then gradually decreased so to keep the patient in a quiet relaxed state. No serious side effect has been observed. However, occasionally diarrhoea becomes a disturbing reaction. The occasional side effect of producing a pronounced hypotensive effect wherein the blood pressure drops to levels of 80 systolic especially in hypertensive patients, makes it necessary to use this drug with caution so to avoid these complications. The drug is admittedly a useful aid in treatment of delirium tremens.

Promazine Treatment of Delirium Tremens:

In the 1954 to 1956 period a new drug became available for the treatment of cases of central nervous system excitation, and for calming the acutely agitated patient. This drug was Promazine Hydrochloride and pharmacologically is one of the phenothiazine compounds. The drug is believed to exert actions on the myoneural junction of muscle (a depressant effect), also, an inhibiting effect on the diencephalic centers, also, a dampening effect on the arousal mechanism in the reticular substance. Clinically, it has been found useful and indicated in several acute mental disturbances such as the alcoholic syndromes of delirium tremens, acute hallucinosis, tremulousness, and inebriation, and in other psychoses where acute agitation is present. It is contraindicated in comatose states which are due to central nervous system depressants, since the drug has been shown to potentiate the action of barbiturates and presumably a similar effect occurs when alcohol or opiates are used concurrently. This precaution is important since when the patient is first seen he may have been given opiates or barbiturates or have taken alcohol and initial dosage of Promazine should therefore be kept at a minimum (50

to 75 mg.) in order to avoid inducing too deep a state of unconsciousness. In general, the dosage and route of administration of this drug is determined by the degree of central nervous system agitation and by the response to the initial dose. In dealing with delirium tremens patients the intensity of agitation is usually severe enough to warrant usage of the drug intramuscularly and here the dose may be larger provided no concomitant opiates or barbiturates have been taken. Thus, the initial dose might be 100 mg. and up to 150 mg. in more severe cases. There usually follows a period of sleep or quiet, drowsy state and reduction in tremulous, agitated behavior for the next several hours following which further maintenance dosage of Promazine is given with either oral or intramuscular administration in a dosage of 100 mg. every six hours. As in all drug administration each physician must learn how to use the drug in a method best suited to his individual concept of treatment and no hard and fast dosage schedule can be given here. It has been said that 800 mg. daily for periods of several months have been tolerated without difficulty and single oral doses of 500 mg. have been taken safely (these figures are stated in the manufacturer's literature). The drug has certain advantages over Reserpine or Chlorpromazine, that is, it is reported not to produce precipitous falls in blood pressure nor does it produce vasomotor collapse; there is no pain on injection and thus far, cholangiolitic type of jaundice has not been a complicating disorder. Two valuable clinical studies on the use of Promazine in alcoholic psychosis have been published by Figurelli.^{2,6} In the initial study² 40 cases of delirium tremens were treated in 54 consecutive admissions for alcoholism using Promazine as the mainstay of treatment. In the second paper⁶ by this author, 180 patients with delirium tremens were treated using Promazine Hydrochloride and using a dosage schedule consisting of 200 mg. for the initial intramuscular injection followed by 100 mg. within the next four hours and then an oral administration of 100 mg. four times a day for maintenance thereafter. This schedule was reported to be very satisfactory in handling delirium tremens cases and made it possible to eliminate many of the time consuming nursing procedures previously used. Promazine has been used in some of these cases at this hospital and while not used as extensively as Reserpine, it has shown that it is a useful drug once the physician becomes familiar with its properties and method of administration. It is not as useful in acute inebriate states since it potentiates the effect of alcohol.

REVIEW OF CLINICAL EXPERIENCES

A total of 45 cases have been reviewed to determine the characteristic features of acute complications of alcoholism as they occurred at this hospital. In the coding of these cases, they have been included under the common diagnosis of "acute brain syndrome" and further specified as being alcoholic hallucinosis or delirium tremens. Usually, both of these states occur but a few

have shown only the hallucinosis predominantly. For purposes of this review, it has been considered that these are essentially the same disease, with delirium tremens being a more severe degree of involvement. Of the 45 cases reviewed, 38 had typical delirium tremens; one was classed as acute hallucinosis only and the remaining six classed as an acute tremulous state with some mental disturbance. The various phases of these complications are listed in the descriptive paragraphs below and with reference to the statistics in Tables 1 to 6.

Time of Onset with Relation to Drinking: Table 1

Since there has been divided opinion on the effect of sudden withdrawal of alcohol in the chronic drinker, with regard to the likelihood of precipitating delirium tremens, it was thought worth an analysis of this point from the histories. It was found that 25 had either one or the other of these two complications (or both) developing while they were actively drinking, and 10 developed these after they had stopped drinking (usually for only a short interval). Since treatment in the United States generally does not include the giving of alcohol to these patients, this point is of importance. It seems obvious that at some stage in the drinking (when it is excessive) there must be a cessation, either voluntary or because of intolerance to the drug, or because the patient cannot keep his supply replenished due to lack of money. Actually, all of these mechanisms seem to apply in many cases. There is reason, therefore, in abruptly stopping the drug when the patient comes under treatment since this merely anticipates what will happen inevitably, and has the advantage of preventing further nutritional depletion of the patient. It was noted that a common sequence was the occurrence of some complicating illness, or accident so that the patient could not continue his drinking, and after a short interval of two or more days, manifestations of delirium tremens would appear. It seems that the routine hazards or mishaps of everyday living serve as interruptions of long sustained excessive drinking and even though these complications may result, the end result is to get the sick patient under medical care, whereas he may have refused to do this voluntarily. The statistics showed that 10 patients had delirium tremens before admission to the hospital, and 18 showed evidence on the admission examination and finally nine cases developed this disorder after admission. Eleven cases gave a prior history of alcoholic psychoses, usually a similar experience to the present one. The chief complaints were of interest. When possible to get it from the patient, various terms were given, among which were "the shakes," seizures, "blackout spells," and "nervousness." It is convenient to mention at this point that whisky was the most frequent form of alcohol used with beer as second most common, and use of both together frequently. Uncommon sources were vanilla and lemon extract and shaving lotion. The alcoholic patient usually minimizes his consumption, but it is important to get an accurate estimate

of the amount, kind, and frequency of alcoholic drink used. It is the patient who has used liquor daily for long periods who most surely will be the more severe case of delirium tremens. The intermittent drinker, even though he has drunk heavily during a debauch, seems to have the milder degree of delirium tremens, and at times it seems possible to avert this complication or control it to a borderline degree only.

Table 1	Cases
Number of cases reviewed	45
Hallucinosis	39
Delirium Tremens	38
TIME OF ONSET WITH RELATION TO DRINKING:	
Actively drinking at onset	25
Stopped before onset	10
INTERVAL FOR OCCURRENCE OF DELIRIUM TREMENS:	
Before admission	10
On admission	18
After admission	9

The Role of Complications: Table 2

It frequently is clear that some sort of complication to the patient's health acts as a precipitating factor in the onset of delirium tremens. All conceivable mishaps can occur to the alcoholic, and what is worse, these complications are often masked and not recognized on the admission examination. This lack of detail may make the examiner proceed with caution until he knows more about recent events, and of necessity valuable time is lost. Such patients are usually difficult problems for treatment in their homes or community hospital and thus they are sent to a larger hospital by ambulance and are unable to give any history by themselves. Friends or family may not appear till later and full facts are delayed when so urgently needed. Furthermore, it is difficult to examine a patient in active delirium tremens — he is in constant motion or tremor; cooperation is nil, and he may be openly fearful or hostile toward the examiner's attempts to examine him. He is disoriented and often agitated and may attempt to escape because of his hallucinatory fears. Trauma is a notorious complication in the alcoholic, and head injuries must always be borne in mind; respiratory infections are common — x-ray views are not easy to secure because of the lack of cooperation or motion. Statistics show that liver disease (cirrhosis) leads the list of complications and is a chief factor in the causes of death. About 50 per cent of the cases in this study had liver disease. The brom-sulfalein liver function test was used along with the information obtained from the admission work-up to establish the status of liver function. At times a record of previous hospitalization gave valuable clues as to existing liver disease. This particular complication becomes more perplexing when a differential diagnosis must be made as to whether hepatic encephalopathy may

be responsible for the patient's behavior, or whether both this state and delirium tremens are concurrently present. A blood ammonia determination may be helpful in such situations. Table 2 gives statistics on complications encountered in this group of patients.

Table 2: Complications	Cases
Liver Disease (cirrhosis)	12
Infections	4
Trauma	2
Hepatic encephalopathy	1
Kidney disease	1
Duodenal ulcer (hemorrhage)	1
Myocardial infarction, recent	1
Blindness, partial	1

Statistics on Therapeutic Measures: Table 3

In this tabulation, the purpose has been to analyze the details of treatment. Figures show that sedative drugs and tranquilizers were the most frequent therapeutic measures. Of the non-tranquilizers, paraldehyde was the most important being used in 27 of the cases. This drug is especially appreciated by the alcoholic patient due to its effect of quieting the sensation of tremors. Chloral hydrate was used occasionally. The tranquilizers were used on 47 occasions in this group. This showed that two different tranquilizers were used in certain patients, and represented either an attempt to use the combined effect of two different drugs, or more commonly, a change made to secure a more effective tranquilizer effect. Reserpine was by far the first choice, being used in 33 cases. Chlorpromazine and promazine were the other tranquilizers used. Thirty-one cases were felt to be sufficiently dehydrated to require parenteral fluids. Electrolyte studies in blood serum frequently revealed slight changes showing a tendency toward an acidosis. Isotonic sodium chloride solution U.S.P. (normal saline solution) was the chief parenteral fluid used. Vitamin concentrates, chiefly B complex and C (with thiamin hydrochloride and nicotinamide in particular) were used almost routinely (although no figures are included in Table 3). Antibiotics were used in 12 cases. The need for these should be carefully considered at the outset since infections may be masked. Corticosteroid therapy was used in two cases. These were in situations of a failing circulation with hypotension and threatening shock.

Table 3: Therapeutic Measures	Cases
Parenteral fluids	31
Sedatives (paraldehyde)	27
Tranquilizers: Reserpine	33
Chlorpromazine	10
Promazine	4
Restraints	14
Corticosteroids	2
Antibiotics	12
Vasopressors (circulatory)	2

Results (Recovery, Relapse, Deaths): Table 4

The average case of delirium recovers from the acute phase in two to three days but may drag on for a week. Relapses occur when the effect of the sedatives or tranquilizers becomes eliminated and is not renewed at proper intervals. They can be controlled by regulating dosages of these drugs. Three cases relapsed in this study. Eight deaths occurred but the statistical percentage cannot be estimated since all the death cases were included here but not all of our delirium tremens cases were used. The deaths occurred early in course of the delirium. Causes of deaths are given below.

Table 4: Results (Recovery, Relapse, Deaths)	Cases
Steady recovery after 1 day	2
Steady recovery after 2 days	9
Steady recovery after 3 days	11
Steady recovery after 4 days	8
Steady recovery after 5 days	1
Steady recovery after 8 days	2
Relapses	3
Deaths: On arrival at hospital	1
1st day	3
2nd day	2
3rd day	2

Causes of Death: Table 5

Here are shown eight cases, seven of which seem clearly established with one being a little uncertain, but probably should be included. Three of these died having serious liver disease and this points up the experience of other surveys of this disease. Two cases of infection complicating the delirium tremens died. Both of these succumbed early in the course of their disease. Two cases died without the mechanism of death being clearly involved in any other organ or system. The cause seemed to be a circulatory collapse.

Table 5: Causes of Death	Cases
Delirium Tremens with hepatic coma (DOA)	1
Delirium Tremens	1
Delirium Tremens with convulsive episode	1
Delirium Tremens with peritonitis	1
Delirium Tremens with lobar pneumonia	1
Delirium Tremens with cirrhosis of liver	2
Delirium Tremens with hepatic encephalopathy	1

Miscellaneous Data: Table 6

Hyperpyrexia of 105 degrees or over was noted in two cases with one temperature reaching 107 degrees. This was complicated by pneumonia. This tendency for high temperatures in delirium tremens has been reported by other investigators especially when pulmonary infections are present.

Only three cases of hypotension were noted and these came with the use of Reserpine. Here the blood pressure dropped from 170/130 on admission to 80/60 in 12 hours and after 7.5 mg. of Reserpine had been given. In this case, the pressure then rose to 120/80 and after

18 hours had again dropped to 80/60. However, the pressure again improved even though Reserpine was continued. Another case showed a drop from 190/140 to 70 systolic by the third day. Response to normotensive levels occurred after a vasopressor drug had been given. A third case showed hypotensive drop to 84/50 with response to Levophed® therapy. As far as is known, the patient was not originally hypertensive.

Table 6: Miscellaneous Data	Cases
Hyperrexia cases: Temp 104 degrees	2
Temp. 105 degrees	1
Temp. 107 degrees	1
Hypotension (arterial) from use of tranquilizers (Reserpine)	3
Promazine	0
No serious cases of hypotension occurred in this study.	

CONCLUSIONS

Although many of the neurologic complications of alcoholism are considered to be due to related nutritional deficiency, delirium tremens and acute hallucinosis are more directly dependent upon the drug itself. These acute hallucinatory states with associated tremors, delirium and often autonomic symptoms of fever, sweating and tachycardia are generally felt to represent various degrees of an alcohol withdrawal syndrome.

Full-blown delirium tremens is a serious, exhausting disorder generally associated with mortality of 5 to 15 per cent. The majority but not all of the reported deaths are associated with serious complications often masked by the severe, overactive mental state. The more common of these are severe liver disease and infections, particularly pneumonia.

Rest, restoration of nutrition and fluid balance, sedation and the careful diagnosis and treatment of complications constitute the important features of successful treatment. Two of the newer "tranquilizing drugs," reserpine in intramuscular doses of 2.5 mg. and promazine are considered particularly effective and have been reported to result in a lowering of the mortality and a shortening of the duration of the delirium. Reserpine has resulted in abrupt drops in blood pressure in originally hypertensive subjects.

The experience of the Togus Veterans Administration Hospital Staff with 45 cases of acute hallucinosis and delirium tremens has been reviewed. There were eight deaths, six of which were associated with complications, two acute infections and four cases of severe liver disease. Tables showing relationship to drinking, complications, therapeutic measures employed, time of recovery and causes of death are presented. It is concluded that delirium tremens is a serious and potentially fatal disease requiring careful attention to details of treatment in the use of the various therapeutic agents available. A particularly diligent search for complicating illnesses which may gravely effect the prognosis is of utmost importance.

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A SURVEY OF 102 PATIENTS WITH BRONCHOGENIC CARCINOMA AT THE TOGUS VETERANS ADMINISTRATION CENTER

Continued from page 250

mediastinal gland involvement. Such conditions were certainly not the case in our own patients.

SUMMARY

1. This is a survey of 102 patients with bronchogenic carcinoma observed at Togus between June of 1948 and February of 1957.
2. The poor over-all survival time, just over four months from onset of hospitalization to death, was attributed to a high percentage of metastases noted at time of initial diagnostic work-up and present during the short course of the disease (76.5 per cent of all patients).
3. Survival after pneumonectomy was significantly larger than with all other forms of therapy.
4. There was no apparent prolongation of life in this series with irradiation and nitrogen mustard.
5. Emphasis should be laid on early diagnosis and early thoracotomy.

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The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

Forand Bill Hearing Set: Key Groups Will Testify

House Ways and Means Committee has scheduled five days of hearings on the Forand bill, commencing July 13. Testimony will be presented by the American Medical, American Dental, American Hospital, American Nurses', American Osteopathic and American Nursing Home Associations, among others.

Group Will Appraise Use of U.S. \$\$\$ in Research

As a sort of conscience-appeaser, prior to voting unprecedented increases in grant money for medical research, some Senators put through a committee resolution authorizing a special study of the uses to which Federal grants-in-aid to medical schools, hospitals and other research beneficiaries are being put. A report is to be filed with the Appropriations Committee by February 1, 1960.

Since Senator Lister Hill (D., Ala.) is to name the outside experts who will make the study, it may be assumed that their findings will result in future requests for still greater funds. Thus, what may have been theoretically intended to check the tide of government spending in this area may have precisely the opposite effect.

Advisors Report to Public Health Service on Poliomyelitis Vaccine

PHS Surgeon General Leroy E. Burney has made

public the recommendations of an advisory group which reviewed four years of experience with Salk vaccine against poliomyelitis. It reaffirms the basic series of three injections for persons under 40. For infants up to age six months, a four-injection series is recommended. Meantime, Dr. Burney appealed for greater use of vaccination in the face of the rising incidence of paralytic poliomyelitis.

Several scientific papers testifying to effectiveness and safety of the Cox-Lederle live virus vaccine were presented last week at an international meeting on prevention of poliomyelitis. Its use in infants, pregnant women and children up to age 21 was described.

Plans Made for Cancer and Antibiotics Meetings

Arrangements are nearly completed for the Seventh Annual Symposium on Antibiotics, November 4 through 6, and a special conference on clinical anti-cancer drug research, November 11 and 12. They will be held, respectively, at the Hotel Mayflower and the Hotel Statler in Washington, D. C.

Medical Professional Liability — Irrigation of "T" Tube

The plaintiff, a 67-year-old man, brought this action for malpractice against defendant physician for personal injuries. The plaintiff, after a gallbladder operation had a "T" tube inserted in his common duct. The defen-

dant physician irrigated the tube with a mixture of 50% alcohol and 50% ether, after which the plaintiff became seriously ill with jaundice and distention. At the conclusion of the plaintiff's case, the defendant's motion for judgement of non-suit was granted on the ground that the plaintiff failed to show that such irrigation was in violation of the accepted medical practice in that locality.

The plaintiff's medical expert witness had testified that the irrigation of the "T" tube was an accepted medical practice, but that the irrigation of the liver was not an accepted medical practice anywhere. Although this witness first testified that in his opinion it was impossible to irrigate the liver, he later said that the solution would cause the sphincter muscle to close, and, if the gallbladder had been removed as it was here, the solution would have no place to go but back into the liver. The plaintiff's daughter testified that the defendant told her he had irrigated the liver through the "T" tube under pressure. The Montana Supreme Court held that the above summarized evidence was sufficient to sustain a verdict for the plaintiff if one should be returned for him, and accordingly reversed the lower court's decision and remanded the case for trial.

Consumer Costs of Medical Care Rise

Consumer costs of medical care rose 0.4 per cent in May, according to monthly price index report by the Bureau of Labor Statistics. This category — it includes hospital rates and insurance premiums and certain drugs, as well as physicians' and dentists' fees — thus maintained its unique record of continuous ascent in the postwar period.

Medicare Loosens Rules to Combat Cancer Early

Medicare headquarters has now issued a directive (ODMC No. 7-59, dated June 1) whose essence is contained in this sentence: "It is the position of this office that the patient with suspected and/or proven malignancy is an acutely ill patient and qualifies for care under the program." Henceforth physicians may hospitalize patients in whom cancer is suspected with assurance that medical and hospital expenses will be borne by Medicare."

"When in the opinion of the cognizant medical authority," says the directive, "treatment is urgently required and performed in a hospital without delay, immediately upon discovery of the condition, such care should not be considered plannable."

Keogh Bill Held Needed as Incentive to Doctors

Medical witnesses appearing before the Senate Finance Committee on the Keogh bill (HR 10) said an incentive of this kind is imperative to arrest an alarm-

ing decline of qualified applicants for schools of medicine. This point was stressed by Drs. George M. Fister and Vincent W. Archer, testifying for the A.M.A., and Edwin P. Jordan, in behalf of the American Association of Medical Clinics. Dr. Fister added that the rising tendency of physicians to work on salary, making themselves eligible for retirement benefits which are denied the self-employed, portends serious problems created by maldistribution.

"Unless something is done to make self-employment as financially attractive as employee status, we believe that there is a real danger that many professional men will bypass the private practice of their profession," said Dr. Fister, an A.M.A. trustee and legislative chairman.

Dollar-Size of Medical Lobby Shown in Report

Lobbying reports covering the first quarter of 1959 include the following (sums represent expenditures attributable to activities designed to influence Congressional legislation):

American Cancer Society, \$7,249; American Hospital Association, \$10,720; American Medical Association, \$11,362; American Nurses' Association, \$5,659; American Optometric Association, \$2,470; American Osteopathic Association, \$572; American Veterinary Medical Association, \$650; Arthritis and Rheumatism Association, \$1,169; Association of American Medical Colleges, \$3,333; Association of American Physicians and Surgeons, \$1,500.

The American Dental Association report was not received in time for publication in the June 3 Congressional Record. It included, however, the A.D.A. lobbying expense report for the fourth quarter of 1958 — \$9,968.

A.M.A. Actions — Atlantic City, June, 1959

Social Security Easily Defeated By Delegates

The defeat of resolutions urging the inclusion of self-employed physicians under social security has never been accomplished more easily. More and more state and local medical societies are turning up majorities, via questionnaire polls of membership, in favor of joining up with OASDI. Nevertheless, at the national level sentiment against participation was never stronger, regardless of the rank and file trend.

In reference committee hearings, 23 physicians spoke out — many of them with intense feeling — against inclusion. Only five took the opposite stand and their presentations were mostly perfunctory. On the House of Delegates floor, the committee recommendation that the A.M.A. continue to oppose social security was adopted with no discussion whatever. In the voice vote, there was only a scattering of no's.

Discussants in the committee said doctors' ignorance of facts is responsible for their endorsement of social security in society-sponsored polls. No such imputa-

tion was made from Illinois or other states where mail surveys have shown the majorities of responding doctors to be against participation.

New Policy Of Relations With Osteopathy Adopted

The House of Delegates approved this policy to narrow the gap separating majority medicine from osteopathy:

1. As in the past, voluntary professional associations between M.D.'s and persons practicing systems of healing not based on scientific principles shall be regarded as unethical.

2. States shall be encouraged to amend their healing practice acts so that all who would practice as physicians and surgeons shall meet identical qualifications, take the same examinations and graduate from professional schools approved by the same agency.

3. "It shall not be considered contrary to the principles of medical ethics for doctors of medicine to teach students in an osteopathic college which is in the process of being converted into an approved medical school under the supervision of the Council of Medical Education and Hospitals (A.M.A.)."

4. A.M.A. trustees are directed to appoint a liaison committee to meet with representatives of the American Osteopathic Association on "problems of common concern, including inter-professional relationships on a national level."

D.O.'s On Hospital Staffs

Just as the above represents a compromise with the less restrictive plan of rapprochement that was advanced by the A.M.A.'s Judicial Council, the House of Delegates also modified a resolution seeking to permit osteopathic physicians to practice in hospitals without jeopardizing the accreditation status of the latter.

This is the action which was taken: "The A.M.A. representatives on the Joint Commission on Accreditation of Hospitals (shall) suggest to the Joint Commission that they inspect upon request and consider for accreditation without prejudice those hospitals required by law to admit osteopathic physicians to their staff."

House Reaffirms Stand On Care Of The Aging

Without dissent, the House of Delegates supported the report of the Council on Medical Service in which satisfaction is expressed with measures currently being taken to bring good medical care within the reach of older persons of modest income. No change was made in the A.M.A.'s attitude in opposition to the Forand bill (HR 4700), which amends the social security law

to provide hospital and surgical benefits for the aged and certain other OASDI participants.

On "Socialized Medicine"

An Arizona resolution implied that Medicare and certain parts of the veterans' medical service program are in the mold of socialized medicine and demanded A.M.A. censure. As passed by the House, however, the resolution was watered down so as to render it innocuous.

Also rejected was a Connecticut resolution criticizing the Labor Department's monthly consumer price index on the grounds that it does not give an accurate picture of the fluctuations in physicians' fees.

A.M.A. Shifts Left On Free Choice And Third Parties

In approving recommendations of the Commission on Medical Care Plans (Larson report), with minor changes, the A.M.A. has tried to make it easier for state and local medical societies to get along with co-operative clinics, labor-sponsored plans and closed panel groups providing medical services. Under the expert handling of Dr. John S. DeTar, reference committee chairman, this touchy issue sailed through smoothly to the relief of A.M.A. leaders who had feared a bitter fight on the floor.

What the autonomous state and local societies will do is one thing. But the national has now made it clear that it no longer bears animus *per se* against such programs as the United Mine Workers, Kaiser, New York's HIP, etc. Its action is likely to encourage the labor health movement.

Briefs On A.M.A. Policies With Government Angles

A resolution was adopted congratulating California on a newly-enacted anti-quackery law. Similar legislation was urged elsewhere.

Endorsement was given the Wisconsin Medical Society campaign for a postage stamp on traffic safety.

A New York resolution made it mandatory for A.M.A. committees and officials to lodge formal protest against public releases by governmental agencies which made mention of the medical profession in an "unfavorable manner." The House of Delegates, however, did not pass it.

In voting continued opposition to social security for physicians, the A.M.A. rejected a resolution by Dr. V. W. Archer of the Virginia delegation which simply requested that consideration be given the results of polls taken among M.D.'s throughout the nation.

First International Medical Conference On Mental Retardation

The Eastland Hotel, Portland, Maine, U.S.A.

JULY 27 — JULY 31, 1959

GENERAL CHAIRMAN

Peter W. Bowman, M.D., Pownal, Maine

PROGRAM COMMITTEE

Hans Mautner, M.D., Pownal, Maine, *Chairman*
Howard V. Bair, M.D., Parsons, Kansas
Malcolm J. Farrell, M.D., Boston, Massachusetts
Ella Langer, M.D., Augusta, Maine

GENERAL INFORMATION

REGISTRATION AND INFORMATION:

(Lobby—Eastland Hotel)

The Registration and Information desk will open Sunday, July 26—10:00 a.m. to 6:00 p.m. Monday, July 27 through Thursday, July 30—8:00 a.m. to 5:00 p.m. Friday, July 31—8:00 to 12:00 a.m.

Ladies Registration:

(Off-lobby, First Floor, Eastland Hotel)

Sunday, July 26—10:00 a.m. to 6:00 p.m.

Monday, July 27 through Thursday, July 30—8:00 a.m. to 5:00 p.m.

Registration Fees:

For Conference Members—\$10.00

(Friday morning session only—\$3.00)

Ladies—\$2.00

SPECIAL MEETINGS:

Special meetings will be announced at the end of each morning session and will also be posted on the Conference Bulletin Board.

P R O G R A M

MONDAY, MORNING, JULY 27

Chairman: DR. P. PLUM, PROFESSOR of Pediatrics
Copenhagen, Denmark

9:30 *Welcome Addresses*

10:15 *Brain Anatomy and Mental Deficiency*

DR. P. I. YAKOVLEV

Professor of Neuropathology, Harvard University,
Boston, Massachusetts

11:00 *Experimental Production of Congenital Malformations
of the Central Nervous System*

DR. J. WARKANY

Professor of Research Pediatrics, University of Cincinnati,
Ohio

11:45 *Enzyme Defects and Mental Deficiency*

DR. D. Y. Y. HSIA

Associate Professor of Pediatrics, Northwestern University,
Chicago, Illinois

12:30 *Luncheon Period*

MONDAY AFTERNOON, JULY 27

Chairman: DR. P. PLUM, Professor of Pediatrics,
Copenhagen, Denmark

*Some Fundamental Characteristics of Autonomic Physiology
and their Implications for the Highest Function of the Brain*

2:00 *The Autonomic Regulation of the Brain*

DR. E. GELLHORN

Professor of Neurophysiology, University of Minnesota,
Minneapolis, Minnesota

2:45 *Electrogenesis, Normal and Abnormal, in the Fetal Brain*

DRS. F. MORRELL, W. BRADLEY AND T. KAISER

Neurophysiology Laboratory, Division of Neurology,
University of Minnesota, Minneapolis, Minnesota

3:30 *Exploration of the Roles of the Upper Brain Stem
and Basal Forebrain in Animal Behavior*

DR. W. R. INGRAM, Professor of Anatomy, and DR.
I. R. KNOTT, Professor of Medical Psychology, State
University of Iowa, Iowa City, Iowa

4:15 *Discussion*

Discussion leader: DR. H. MAUTNER, Pineland Hospital,
Pownal, Maine

TUESDAY, MORNING, JULY 28

Chairman: DR. G. JERVIS, Associate Clinical Professor
of Psychiatry, Columbia University, New York,
Director of Research, Letchworth Village, Thiells,
New York

9:00 *Cerebro-Spinal Birth Injury and Mental Deficiency:
Types, Causes, Pathogenesis, Consequences and Prevention*

DR. P. SCHWARTZ

Professor em. of Pathological Anatomy, University
of Frankfurt a/main, Germany, now Warren, Pennsylvania.

9:45 *The Effect of the Delivery Process and the Onset of
Respiration on the Acid-Base Balance of the Newborn*

DR. L. S. JAMES

Research Associate in Pediatrics and Anesthesia,
Columbia University Presbyterian Medical Center,
New York

10:30 *Intermission for Exhibits and Films*

11:00 *Brain Metabolism Before and After Birth*

W. A. HIMWICH, Ph.D.

Medical Research Associate, Galesburg State Research
Hospital, Galesburg, Illinois

11:30 *Complications of Pregnancy and Mental Deficiency*

DR. B. PASAMANICK, Professor of Psychiatry, and DR.
H. KNOBLOCH, Associate Professor of Pediatrics,
University Health Center, Columbus, Ohio

12:15 *Luncheon Period*

TUESDAY AFTERNOON, JULY 28

Chairman: DR. G. JERVIS, Associate Clinical Professor
of Psychiatry, Columbia University, New York,
Director of Research, Letchworth Village, Thiells,
New York

2:00 *Developmental Anomalies in the Region of the Foramen
Magnum*

DR. J. D. SPILLANE

Consultant Neurologist, Cardiff University, Cardiff,
England

2:45 *The Treacher Collins Syndrome and Mental Deficiency*

DR. L. KULCZYCKI

Assistant in Pediatrics, Harvard Medical School, Boston,
Massachusetts

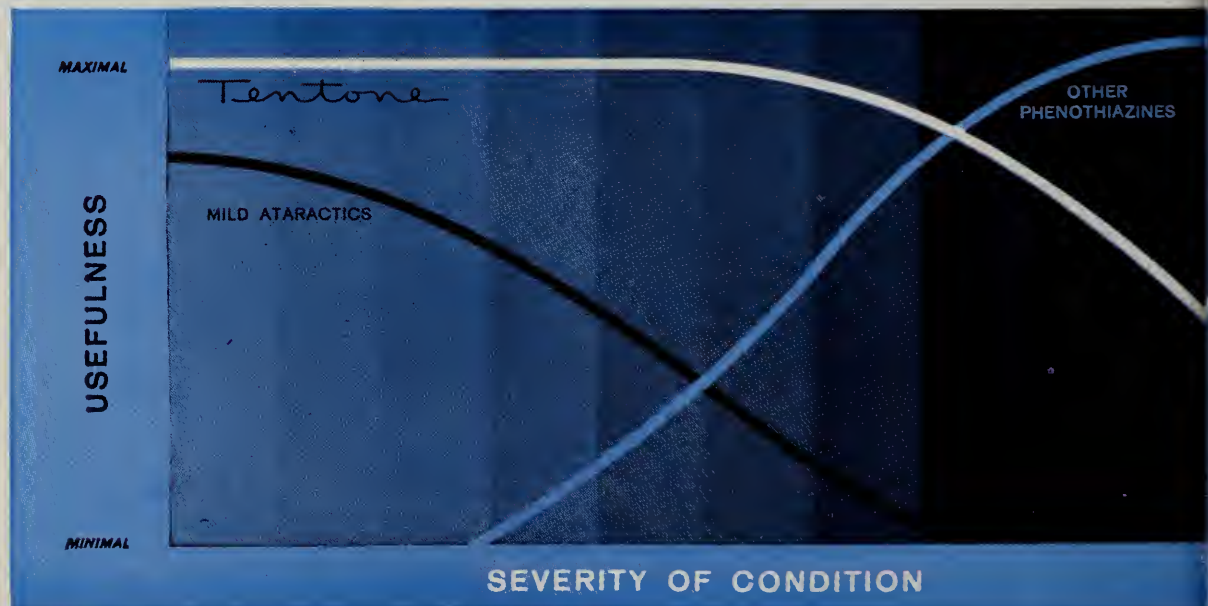
3:15 *Infections and Mental Deficiency*

DR. H. ASPERGER

Continued on page 281

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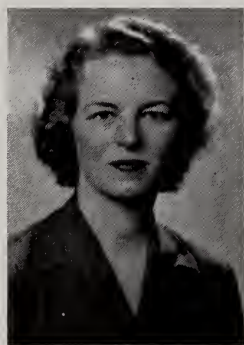
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1949 THE WOMAN'S AUXILIARY TO THE MAINE MEDICAL PAST PRESIDENTS



1949

Mrs. Charles W. Steele



1950

Mrs. Edward W. Holland



1951

Mrs. Clyde I. Swett



1952

Mrs. Philip B. Chase



1953

Mrs. Asa C. Adams

POLAND SPRING HOUSE,

Mrs. Linus J. Stitham presided at the annual meeting at which time the Auxiliary's 10th Anniversary was observed, with over 100 members and guests in attendance.

The Pledge of Loyalty was repeated by the group.

Mrs. John P. Greene, president of the Androscoggin County Auxiliary, welcomed the assembly.

After Mrs. Stitham introduced members and guests at the head table, Eugene E. O'Donnell, M.D., President of the Maine Medical Association, brought greetings from the Association.

The Roll Call by counties was taken by the Secretary, with Androscoggin having the largest attendance.

The minutes of the last annual meeting were read and accepted.

The Treasurer, Mrs. Dexter J. Clough II, presented her report, followed by the Auditor's report.

Upon motion of Mrs. Richard T. Munce, which was seconded, the group voted to accept the Auditor's report which carries with it the report of the Treasurer. Mrs. Paul A. Fichtner presented the A.M.E.F. awards. These awards were based on the largest contribution per member. The first award went to Oxford County, second to Franklin and third to Cumberland.

The following officers were elected for 1959-1960: President—Mrs. Walter E. Penta, Portland; President-Elect—Mrs. Peter B. Aucoin, Rumford; First Vice President—Mrs. Richard T. Munce, Bangor; 2nd Vice President—Mrs. Benja-

min L. Shapero, Bangor; Treasurer—Mrs. Dexter J. Clough II, Bucksport; Recording Secretary—Mrs. Paul W. Burke, Newport; Parliamentarian—Mrs. Philip B. Chase, Farmington; Chairmen of Standing Committees: Organization, Mrs. Peter B. Aucoin; Public Relations, Mrs. Paul A. Millington; Publications, Mrs. James W. Reed; Program, Mrs. Maynard B. Colley; Bulletin, Mrs. Howard H. Milliken; Legislation, Mrs. Cecil F. Thompson; Necrology, Mrs. H. Draper Warren.

Chairmen of Special Committees: Civilian Defense and Public Safety, Mrs. Donald F. Marshall; American Medical Education Foundation, Mrs. Paul A. Fichtner; Historian, Mrs. John B. Curtis; Mental Health, Mrs. Arnold W. Moore.

Mrs. F. Erwin Tracy of Connecticut, representing the Woman's Auxiliary to the American Medical Association, spoke briefly and installed the new officers.

Mrs. Stitham expressed her sincere thanks for the cooperation she had received from the members this past year, and to Mrs. Vincent H. Beeaker who had charge of convention arrangements. (The corsages, favors, candles, floral arrangements, door prizes and the gifts for every member made it a real birthday celebration.) She then presented the president's pin to Mrs. Walter E. Penta.

Mrs. Penta spoke briefly, and, there being no further business, the meeting was adjourned.

MATHILDA BURKE
Recording Secretary

ASSOCIATION CELEBRATES ITS TENTH ANNIVERSARY 1959



1954
Mrs. Frank W. Barden



1955
Mrs. Dexter J. Clough II



1956
Mrs. Ralph A. Goodwin



1957
Mrs. James N. Shippee



1958
Mrs. Linus J. Stitham

MAY 26, 1959

PRESIDENT'S REPORT

I have enjoyed my year representing the Woman's Auxiliary to the Maine Medical Association and meeting doctors' wives from all over the state and country. I have visited all organized counties except that of Oxford — I was sorry that due to their having only two meetings, I was not free on their dates. All unorganized counties were contacted, but unfortunately no action was achieved. I have attended tasting suppers, square dances and bridge parties at the different counties — as well as regular meetings — and found them all most pleasant!

I have represented the State Medical Auxiliary at the Maine Safety Conference in Rockland last September, at one Health Council meeting and one Woman's Legislative Council meeting; at the Chicago Conference for State Presidents and Presidents-Elect in October; and at the annual meetings of the following New England states — Massachusetts in May, 1958, Connecticut in April, 1959 and Rhode Island in May, 1959.

I have presided over three State Board meetings — one immediately following the annual meeting last year; one in December; and the final one this morning. I presented the Fall Workshop in December (with the able help of my president-elect) in Portland when we had Mrs. Paul C. Craig, immediate past president of the Woman's Auxiliary to the American Medical Association, as our guest.

Today, we are celebrating ten years of our being

an organized state auxiliary (with a total membership of 375) . . . undoubtedly, we are stronger now than we were on June 20, 1949. I sincerely hope we may see as much growth between this date and the spring of 1969 as we have experienced in the past decade.

There is a great deal of really outstanding work being done by the medical auxiliaries in Maine . . . some by large counties and some by small. You can get a glimpse of it from the excerpts of county presidents' and state chairmen's reports printed further along . . . and I expect their full reports will be published in the INFORMER at a later date. But, no matter how small an organization you may be in . . . how few your members . . . how many miles between you . . . you still can be an excellent auxiliary member by exercising an active interest and enthusiasm in the aims and purposes of your Auxiliary.

Remember . . . important as other activities are . . . hospital canteens, federated clubs, PTAs, Scout work, etc . . . other women can do these jobs. Remember . . . you are one of the comparatively few who are eligible to belong to the Woman's Auxiliary to the Maine Medical Association . . . you owe it to your allegiance!

Give the Maine Medical Auxiliary precedence on your calendar and on your time . . . Be proud of being a Medical Auxiliary member.

HELEN STITHAM



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Western Maine Sanatorium Closes

KATHARINE D. GAY* and OLIVE BONSEY**

In 1901 by a special act of the Legislature "The Maine Sanatorium Association" was incorporated. The incorporators were: Doctor Stephen Weeks of Portland, Doctor Franklin Thayer of Waterville, Doctor Estes Nichols of Hebron, Mr. Charles Payson, banker, of Portland, Mr. Franklin Payson, lawyer, of Portland, and ex-Governor General Selden Connor. An undated booklet thought to be published a few years later states: "This was the first movement in Maine toward the treatment of consumption."

Until the year 1915, when the State assumed responsibility, this group of men, and those who followed them in a similar capacity, financed the construction of buildings and the operation of the "Maine State Sanatorium" in Hebron with funds solicited from private donors. Three of the four patient buildings, and the so called administration building were built and equipped during this period.

The first patient building was constructed in 1903; the administration building in 1904; the second patient building in 1907, and the third probably between 1908 and 1910.

Great credit should be given to those men and women who gave so generously of their time and money, and through whose foresight and generosity Maine was able to offer to a group of its less fortunate citizens the best and only treatment then known for tuberculosis, i.e. rest, fresh air, and good food.

The last major construction was in 1919 following World War I when a patient building for "Tubercular Soldiers, Sailors, and Marines" was authorized by the State Legislature.

For many years this sanatorium has served tuberculosis patients from the western and southern areas of the State. During one period a large number of children were given "preventorium" care.

Due to the fact that the area served contains the greatest concentration of population, it has made treatment facilities available to at least 40% of the new

cases which were reported each year. Figures compiled by the Department of Health and Welfare show that 40% in 1956 and in 1957 and 46.8% in 1958 lived in the five counties of Androscoggin, Cumberland, Oxford, Sagadahoc, and York from which patients were admitted to the Western Maine Sanatorium. The Greater Portland area contributed the largest number of patients.

Old yearly reports reveal that in spite of the fact that need for renovations and new buildings were sought, the requests for funds sufficient to build up and maintain the physical properties of the sanatorium were unheeded through the years.

Since August 1955, much needed replacement of equipment, easy chairs for patients rooms, a broncho-better patient care. Most of this new equipment could have been moved to a new facility, and included in part kitchen ranges and equipment, refrigerators, up-to-date x-ray facilities, laboratory equipment, complete laundry equipment, easy chairs for patients rooms, a bronchoscope and other medical equipment, etc. It was becoming increasingly apparent that the cost of the upkeep of the old buildings, plus the fact that their design does not permit efficient modern day treatment, did not justify their existence.

A group of interested citizens sought legislative appropriation to replace the outmoded cottage style buildings with a facility designed to more easily permit care of these patients in a manner accepted by present day medical standards. One bill sought to rebuild on the same site; another sought to build in connection with a general hospital where medical men in all specialties would be easily available for consultation, or staff membership.

Both bills failed to pass the 99th Legislature. As an economy measure this body deleted from the budget, funds requested for the operation of this sanatorium for the next two years. This deletion has forced the closing of the institution and the transfer of patients to the Central Maine Sanatorium in Fairfield, to which all patients except those living in Aroostook County will henceforth be admitted. The Western Maine Sanatorium at Hebron will be closed on July 11, 1959.

* Administrative Assistant, Division of Tuberculosis Control.

** Medical Social Consultant, Western Maine Sanatorium.

The Department of Health and Welfare wishes to acknowledge with sincere thanks and admiration, the loyalty of those employees, past and present, who have made it possible to operate this hospital and give excellent care to the patients. Doctor Lester Adams, who retired as Superintendent several years ago, served the institution for many years, and his name became synonymous throughout the State, and even beyond its boundaries, with the highest type of tuberculosis care. Other Superintendents who served the sanatorium with distinction were: Doctor Estes Nichols, Doctor Olin Pet-

tingill, Doctor John Pinkney, Doctor James Brewer, Jr., and Doctor Francis Kadi.

At present, Out-Patient Department Tuberculosis Clinics are operating at the Maine Medical Center in Portland and at the Central Maine General Hospital in Lewiston. The Department of Health and Welfare will try to expand and/or develop sufficient clinic service in the general area of the Western Maine Sanatorium to substitute in some measure for the closing of the institution.

Gonorrhea As An Increasing Problem

ALTA ASHLEY, M.D.

In the past two years the number of reported cases of gonorrhea has risen nation-wide, particularly among teenage boys and girls.¹ How great is the rise in actual incidence is difficult to determine because of the notoriously poor reporting of cases where venereal disease is concerned.

About a year ago this office (the District Office of the Department of Health & Welfare) was approached by the Armed Forces because of an increased incidence of gonorrhea among the air forces personnel, asking that we try to find the sources of infection in the civilian population and bring them under control.

Physicians were approached, both individually and at staff and county meetings, but no cause for alarm was voiced on the part of practicing physicians. In most instances it was stated that no new cases of venereal disease had been seen for several years.

Early in May of this year several positive urethral cultures were reported by the laboratory and in the past six weeks, within a ten mile radius of a Central Maine city, nine cases of gonorrhea among civilians and four in servicemen, who have been in this area, have been reported. Twelve of these cases were males. Only one female has been reported even though six other girls were named as contacts of reported cases. The one female case was also named as a contact and her contact (male) was also named as a case. Thus, eighteen different individuals have been involved in this local outbreak.

The ages of the persons involved (with the exception of the four service men whose ages are not known) range from sixteen to twenty-six. Several are at present high school students and most are of high school age. All but two of the girls named as contacts or as a case were eighteen years of age or younger, one was only sixteen. The boys, as is to be expected, were somewhat older. Of the eight whose ages are known

four were 18, two were 23 and two were 26. The oldest girl was only 22.

Thus it is evident that Maine is sharing in the nationwide increase in incidence of venereal disease and, like in the rest of the country, the disease is being found largely among teenage boys and girls.

The control of venereal disease requires adequate treatment of cases and search for contacts so that these contacts can be examined and treated. Only in this way can the spread of infection be prevented.

Adequate treatment requires follow-up examination within two weeks of initial treatment, at which time blood should be obtained for standard tests for syphilis, since this disease may have been acquired simultaneously with gonorrhea.

All persons who have had intimate relations with cases, both during the incubation period and until the disease has been adequately treated, are to be considered contacts. Every available means should be used to get these persons under treatment or observation.

Rules and Regulations of the Bureau of Health require all cases of venereal disease to be reported on special forms directly to the Bureau within forty-eight hours. Reporting may be by number, age, sex and color *except*:

- a. All cases who fail to take the necessary treatment and who fail to remain under the observation of the attending licensed physician until a cure of the disease has been effected according to standards set up by the Bureau of Health.
- b. All Cases who conduct themselves in such a manner as to be dangerous to the public health or fail to observe the necessary precautions indicated in the treatment of the disease.
- c. All Cases where financial obligation for diag-

Continued on page 280

Report Of Delegate To A.M.A. House Of Delegates

Annual Meeting, Atlantic City, June 8-11, 1959

This meeting of The House of Delegates was highlighted by the visit and speech of President Eisenhower. The President urged doctors, as he has labor and management before, to hold the line on prices. He stressed the importance of a balanced budget, the danger of inflation, and need for stability of our economy. He was emphatic in his support of the private practice of medicine but warned that if the cost of medical care is beyond the reach of the average citizen, then the people may demand its representatives to control medical practice by the government. Here, he drew an analogy of more immediate and practical import to the medical care of our Senior citizens by praising the initial efforts of A.M.A. toward solving the health problems of the aged, but also stressing the need for immediate results.

The House of Delegates was given the task of resolving the age-old problems of Osteopathy, Social Security for physicians, Closed-Panel Plans for the care of special groups and United Fund and Voluntary Health Agencies.

OSTEOPATHY

The osteopathic problem was temporarily resolved by the following statements accepted by the House.

1. "... there should be established in each state one educational standard in the field of medical practice administered by a single licensing board.
2. Osteopathic colleges should be inspected and classified by the same standards as our medical schools.
3. All voluntary professional associations between doctors of medicine and those who practice a system of healing not based on a scientific principle are unethical.
4. It shall not be considered contrary to the Principles of Medical Ethics for doctors of medicine to teach students in an osteopathic college which is in the process of being converted to an approved medical school under the supervision of the A.M.A. Council on Medical Education and Hospitals.
5. A liaison committee be appointed by A.M.A. and A.O.A. to consider problems of common concern including inter-professional relationships on a national level.

SOCIAL SECURITY FOR PHYSICIANS

The growing demand by physicians for economic security was recognized and the Board of Trustees was asked to investigate the possibility of developing group insurance and retirement plans for physicians. A more potent educational program was urged to inform doctors of the economic, social, and moral advantages of economic security obtained within the framework of our free enterprise system rather than through the mechanism of government Social Security.

It was pointed out that the U. S. Supreme Court ruled that Social Security is not an insurance program but a tax program and the tax payer has no vested right in its benefits. There is no contract between the individual and the government. The tax rate and benefit structure may be changed at any time by legislative action whereas an insurance contract has a fixed premium and a fixed benefit to be paid at a specified time or event.

Of 243,000 doctors in the country less than 4% are retired and if they work beyond 65 years of age they would not be eligible for benefits until 72 years of age although they would continue to pay Social Security Taxes.

A poll taken in Pennsylvania by the medical society found that 67% of those who were covered by social security were opposed to it while 61% of all physicians in the 'state' were in favor of it.

In short, The House of Delegates of the A.M.A. continues to oppose the inclusion of physicians in the Social Security program.

"FREE CHOICE AND MEDICAL CARE PLAN"

It was reemphasized that "free choice of physician" as a principle should be supported but exceptions might be made in favor of objective of "the highest quality of medical care for all people." It was voted to adopt the recommendation of the commission on medical care plans as follows: Free choice of physician is an important factor in the provision of good medical care. In order that the principle be maintained, the medical profession should assure the competency of physician services and their provision at a cost which people can afford. "Free choice" should be applied as universally as practicable. Free choice of physician is the right of every individual and one which he should be free to exercise as he chooses.

Each individual should be accorded the privilege to select and change his physician at will or to select his preferred system of medical care. The A.M.A. vigorously supports the right of the individual to choose between these alternatives.

Similarly groups should have freedom of choice of types of Prepayment Plans as recommended in this statement: "Those who receive medical care benefits as a result of collective bargaining should have the widest possible choice from among medical care plans for the provision of such care."

Other adopted recommendations of the commission were: State and County Societies were urged to review and study plans in their locality, have liaison with those plans, seek legal counsel when necessary in dealing with them, and eliminate unnecessary use and abuse of medical plan benefits by a small minority of physicians; and provide good medical care to specific segments of the population when necessary.

To prevent an increase of over-all cost of medical care it was recommended that all medical care plans study the possibility of providing benefits to non-hospitalized patients.

A point particularly pertinent to Maine was the advice that medical care plans should be encouraged to increase their efforts to provide health education and information concerning the coverage of their subscribers.

UNITED FUNDS VS. VOLUNTARY HEALTH AGENCIES

A resolution from the Ohio delegation attempted to resolve the controversy between A.M.A. and Voluntary Health Agencies by proposing that the A.M.A.'s American Medical Research Foundation be allowed to receive funds from any source particularly United Funds. However, the previous discussion of the House "to take no action which would interfere with fund raising activities of Voluntary Health Agencies" was not changed. It did recommend that the A.M.R.F. become active and outline its program for research to the House of Delegates.

NATIONAL FOUNDATION

In resolutions from Tennessee and Louisiana, The National Foundation was criticized for its extension into other fields which includes about 33 million children and manifests disapproval of its "Patient Care Policies" which in some chapters disregards the patient's ability to pay. These problems were given to an established committee of the A.M.A. for a report before December, 1959.

MEDICAL DISCIPLINARY COMMITTEE

In February, 1959 the Board of Trustees appointed a Medical Disciplinary Committee to investigate the efficiency and

adequacy of disciplinary laws and rules of State Societies and licensing boards. Then, according to the findings, inquire whether the A.M.A. can assist in maintaining discipline in "the interest of the public and medical profession."

PREPARATION FOR GENERAL PRACTICE

A committee on Preparation for General Practice was appointed by the Trustees in 1956 composed of representatives of Medical Colleges, the American Academy of General Practice and the A.M.A. Council on medical education and hospitals. Fourteen meetings were held over the last three years and the final report was presented at this time. It recommends that "following graduation — a minimum basic 18 months be devoted to the psychiatric, preventative, and rehabilitative aspects of medicine and pediatrics in a broad sense including the care of the new born." This should include ward assignments, care of ambulatory patients, emergency service, and training in minor surgery and primary management of trauma. During the six month elective period at least four months in obstetrics is expected if physician plans to practice obstetrics.

JOURNALS AND NEWS

The House approved The Board of Trustee's recommendation that dues-paying members receive the J.A.M.A., Today's Health, A.M.A. News and a specialty journal of his choice all as a benefit of membership to the A.M.A.

CARE FOR THE AGED

Again an exhortation to "A.M.A., all county societies and physicians everywhere, to expedite the development of effective prepayment program for the group over 65 with modest resources or low family income to accept a level of compensation for medical services rendered to this group." — to allow purchase of this insurance at a reduced premium rate.

NURSING EDUCATION

The A.M.A. committee on Nursing has met several times with A.N.G. and N.L.N. to discuss nursing education and related problems in nursing. There are many facets to the problem of increasing the number of nurses and difference of opinion covering the proper content of nurses educational programs.

Since the N.L.N. in 1952 assumed the responsibility of the voluntary accreditation of all nursing education, there has resulted higher standards with increased cost of nurses education. The A.N.A. and N.L.N. cannot yet agree on joint accreditation. The Hospital Associations want A.M.A. and N.L.N. to act jointly on accreditation; but the A.M.A. does not agree to this at the present time.

The four parties cannot yet agree but continue to meet and discuss mutual problems.

The immediate recommendations are for each society and every physician to establish effective liaison with our nursing colleagues based on the best possible mutual understanding and respect.

The goals of such liaison are to assist when possible nurses' education, increase the facilities for training and aid in recruitment of personnel for nursing schools.

EDUCATION COUNCIL FOR FOREIGN MEDICAL GRADUATES

It was felt by the A.M.A. that this council "provides a sound and reasonable means for the initial evaluation of graduates of foreign medical schools."

A.M.A.-A.H.A. MEDICO-LEGAL EDUCATION COMMITTEE

This committee approved for distribution a film "No Margin For Error" dealing with the subject of hospital liability which can be obtained from the A.M.A. film library.

The committee is investigating the problem of the legal liability of members of hospital medical staff committees and certain aspects of insurance protection for these individuals. It has become apparent that problems of professional liability cannot be dealt with apart from matters of public safety. Each hospital staff should have a committee to review and advise concerning methods of reducing incidents in the course of patient care that give rise to liability or potential liability.

REMARKS OF THE OFFICERS

President Gunderson stressed the need for continuing medical education for all practitioners and stated, "To me any physician who is not making an effort to keep abreast of medical knowledge blackens the eye of American medicine as much as the individual who overcharges."

President-elect Orr, pointed out the need for keeping medical costs at a minimum by utilizing all available and less expensive facilities during convalescence or chronic illness. Each physician should aid hospitals and other facilities to reduce costs without impairing treatment.

He also pointed out that physicians should improve their contacts and seek out guidance teachers in junior high and high schools to attempt to interest more students in the practice of medicine. We need more "dedicated young men" entering the field of medicine.

Elected officers for 1959-1960

President: Louis M. Orr, M.D., Florida

President-elect: E. Vincent Askey, M.D., California

Speaker of the House: Norman Welch, M.D., Massachusetts

Vice Speaker: Milford O. Rouse, M.D., Texas

Member of A.M.A. Council on Legislative Activities:

M. A. Vickers, M.D., Bangor, Maine

PHILIP P. THOMPSON, JR., M.D.

Committee Reports — 1958-59

Standing Committees

Medical Advisory Committee

In talking with our Legal Counsel, Mr. Robert O'Connor of Augusta, I am informed that our malpractice cases during the past year have run about average, in the neighborhood of eighteen or twenty. Most of these have been disposed of, but three or four have run into a fair amount of money from the standpoint of settlement.

This fact perhaps accounts for the increased premiums over the past several years in our malpractice insurance. In the Portland area I have heard my colleagues gripe from time to time at the high premium rates of malpractice insurance in the State of Maine, especially where our sister State of New Hampshire, according to what I have been given to understand, has a very much lower premium rate. I confess that I am at a loss as to just how to explain this since I would expect the two states to parallel each other in this respect.

While on the subject of malpractice insurance, I believe it would be worthwhile here to stress the fact that the old ten and twenty thousand dollar policy in these days is hardly adequate to give the practicing physician enough coverage. I would strongly urge every member of our society to check on his coverage and to increase it sufficiently to give adequate protection. During the past several years the public, even in the State of Maine, is becoming more and more "suit conscious" and malpractice suits appear to be on the increase. I have also noted in the Portland area that juries in court cases are becoming much more liberal in their awards and whether or not the juries are keeping up with the inflationary trend in the country I cannot say. However, it would appear to be that plaintiff's awards are becoming higher and higher as time goes on.

On March 20th and 21st of this year I attended a Regional Medical Legal Conference in Washington, D. C. presented by the Law Division of the American Medical Association and the Medical Society of the District of Columbia. Also attending from our society were Drs. Eugene E. O'Donnell, M.M.A. President, Daniel F. Hanley, Executive Director, and Drs. George L. Maltby and C. Harold Jameson, members of the Medical Advisory Committee of the M.M.A. The conference was very well presented and from our standpoints, extremely instructive and in some respects, frightening. In hearing of some of the malpractice suits in the State of California with jury awards running into the \$150,000 and \$250,000 verdicts, we were very happy to realize that we practice our profession in the State of Maine. However, it does point a trend throughout the country, namely that malpractice suits are becoming more frequent and as mentioned above, juries in their awards are becoming more lenient.

As far as the Medical Advisory Committee is concerned, during the past year we have not had any formal meetings as it seems rather impractical to get boys from all sections of this large State unless we have an extremely important reason. In handling the cases which come to the attention of our Legal Counsel, it has been the policy to handle them on an informal basis, contacting members of the Committee according to the area or county in the State in which the case develops. For example, during the past year we have had several meetings relative to this type of case and these meetings consisted of discussion of the merits of the case with Mr. O'Connor and with doctors in the different specialties which the particular case involves. During these meetings which I have attended in Portland, we have had Drs. Eugene E. O'Donnell, James M. Parker, George L. Maltby, Donald P. Cole and Richard S. Hawkes. All have given unstintingly of their time and talents in an attempt to assist Mr. O'Connor in the defense or settlement of malpractice claims. Perhaps this is a good way to function or some of you may believe that it is too informal and that some other mechanism should be set up which would increase the efficiency of the Medical Advisory Committee.

In talking with the members of the Committee, one complaint which they seem to have in common is the fact that they are kept in the dark or not informed as to, as they put it, "what is going on." This, I believe, is a wholly deserved criticism and frequently I feel the same way as I am sure I do not know of all the cases which occur in the State.

I submit these thoughts for your consideration because I feel that this is a subject which concerns each and every one of us engaged in the practice of medicine in the State of Maine. This was fully proven at our Portland Medical Club meeting which was held the last week of May at the Eastland Hotel in Portland. John R. Lincoln, M.D., President of the Portland Medical Club, prepared a panel on Medico-Legal problems which consisted of Mr. Robert O'Connor, Drs. Daniel F. Hanley, Robinson L. Bidwell and myself. At that meeting it was interesting to note that every chair in the large room at the hotel was taken and I saw quite a few of the boys standing up along the wall. As you can imagine, there was considerable discussion and the Society considered it a very successful meeting.

In presenting these remarks, I am hoping that they will stimulate the members of the Council and the House of Delegates to an honest and thoughtful discussion of this problem and come up with some suggestions as to how your Medical Advisory Committee can better serve you.

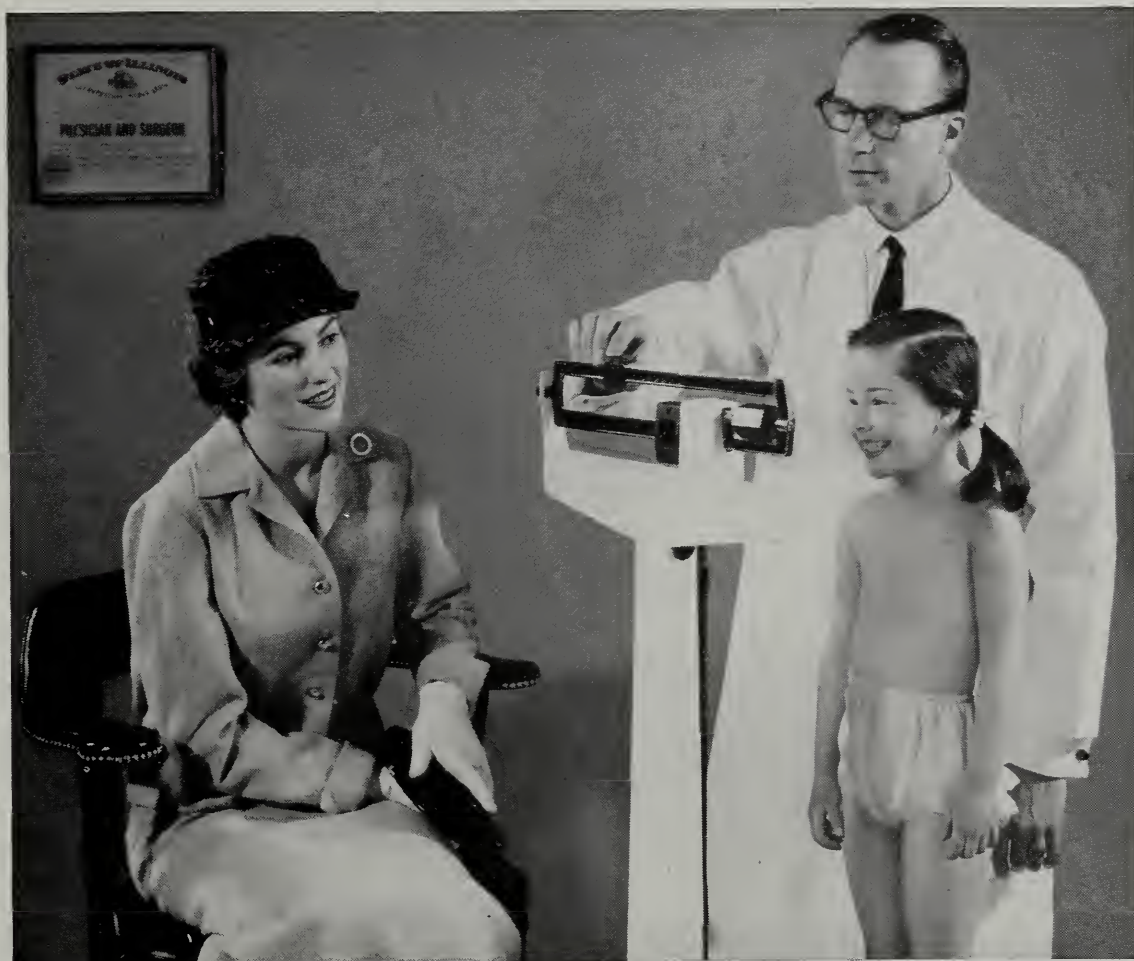
THOMAS A. MARTIN, M.D., *Chairman*

Board of Ethics and Discipline

The Board of Ethics and Discipline has had several letters of minor complaint — misunderstandings which have seemingly been satisfactorily settled by mail. Two major situations were reviewed with the Council at a joint meeting, May 3,

1959, and the problems referred to the Council for final dispositions. The detailed reports are a matter of record in the Council files and need no discussion in this annual report.

ALVIN A. MORRISON, M.D., *Chairman*



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In this study, the weight gained was not lost

after discontinuance of Nilevar therapy although many patients did not continue the sharp gains effected by the drug.

The authors are of the opinion that Nilevar is a highly useful anabolic agent for influencing weight gain in underweight children.

When Nilevar is administered to children a dose of 0.25 mg. per pound of body weight is recommended and continuous dosage for more than three months is not recommended.

Nilevar is supplied as tablets of 10 mg., drops of 0.25 mg. per drop and ampuls of 25 mg. in 1 cc. of sesame oil. Further dosage information in Searle Reference Manual No. 4.

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Research in the Service of Medicine.

*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

Special Committees

Committee on Alcoholism

The Maine Medical Association Committee on Alcoholism has had no formal meeting this past year. As Chairman I attended a two-hour seminar in New York City in January, 1959 on group psychotherapy with alcoholics conducted by Ruth Fox, M.D., under the auspices of the American Group Psychotherapy Association.

I am sure you are aware of the several counseling centers established by the Maine State Division of Alcoholic Rehabilitation, Mr. Max Good, Director. These centers, manned by laymen qualified in counseling with alcoholics and their families, are open five days a week in the Portland, Augusta, Lewiston-Auburn and Bangor-Brewer areas and one or more days a week in Rockland and the Aroostook areas. I know Mr. Good and his associates want to be fully cooperative with the physicians in this service. They are glad to receive referrals

from physicians, and funds are available through this Division for an initial physical examination and medications for one week *only* for those people without immediate means to pay for professional services.

At the Yale School of Alcoholic Studies, several full scholarships are available to physicians for the month of July each year through the Maine State Division of Alcoholic Rehabilitation.

We are happy at this convention to sponsor on Tuesday, June 23, 2:00 to 4:00 P.M., a seminar on "Current Status of the Treatment of Alcoholism" conducted by Martha Brunner-Orne, M.D., a prominent Boston psychiatrist.

GILMORE W. SOULE, M.D., *Chairman*

Maine Multidisciplinary Health Study Group

As representative to the Maine Multidisciplinary Health Study Group, I am happy to make this report relative to the activity of these conferences. Instituted in September, 1957, there have been fourteen of these meetings held in Augusta comprising representatives from the Maine Medical Association, Maine State Nurses Association, Maine League for Nursing, Maine Osteopathic Association, Maine Welfare Association, Maine Licensed

Practical Nurses Association, Maine Association of Nursing Homes, Bingham Associates Fund, Health Council of Maine, State Department of Health, Education and Welfare, and the Department of Institutional Service. Senator Hazel C. Lord and Representative Lucia Cormier have also attended these meetings.

The objectives of these meetings were: 1. To develop



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methods of meeting nurse shortage and related health needs, 2. To establish more effective intrarelations and communications among health allied groups and the public.

A great amount of time was spent in discussing the nursing problem, much of the detailed material being already on file in the office of the Maine Medical Association. The last meeting was held on March 17, 1959. Whether or not discussions of this group will begin again in the fall depends on the need for study of some urgent health problem common to the participating organizations.

As your representative to this Group, I was particularly impressed by the thoroughness, diligence and approach of the various subcommittees which were appointed. I hope that the framework of this group may be maintained for a long time to come for it truly represents a cross section of those agen-

cies which participate in the care and control of the health problems in our State.

I think, however, that the usefulness of this Health Study Group might be better defined if it could be given an official or semi-official status wherein its conclusions and recommendations could be given the kind of recognition such efforts warrant. Otherwise much of the valuable work it has done or could do will be lost through lack of proper channels of action.

I am deeply indebted for the opportunity to participate in these interesting and instructive discussions and I would strongly advise the Maine Medical Association to continue future representation should this Group continue with its work in the fall.

PAUL S. HILL, JR., M.D.

Joint Committee on Nursing and Medical Problems

I submit herewith a short report as Chairman of the Joint Committee on Nursing and Medical Problems. At the December meeting of the Council of the Maine Medical Association, it was proposed that a permanent joint liaison committee be established between the nursing and medical professions of the State of Maine.

Eugene E. O'Donnell, M.D., as President, appointed the following to this special committee:

Philip P. Thompson, Jr., M.D., Portland
Paul S. Hill, Jr., M.D., Saco

Wilson H. McWethy, M.D., Augusta
James A. MacDougall, M.D., Rumford
Eugene E. O'Donnell, M.D., Portland

The Maine State Nurses Association through its President, Miss Eleanore Irish, R.N., concurred in the establishment of this Committee for the purpose of continued liaison between the two professions thus providing a platform to discuss and obtain action on matters pertaining to professional medical and nursing care.

Two meetings were held in Portland in January and Feb-



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ruary. It was found that there were many subjects for discussion wherein there was need for clarification. Unfortunately, at that particular time a bill S.P. 318, "an act to Regulate the Practice of Nursing" was being introduced by the Nurses' Association. There was considerable discussion of the merits of this bill at the second meeting but the development of this committee had not sufficiently advanced to more than scratch the surface of the meaning and scope of this bill. Further meetings were postponed during the period of legislative action.

I think this is a very good illustration of the type of prob-

lem with which such a committee may be faced. It is my opinion that had this committee been in existence at an earlier stage in the formation of such legislature, that a solution could have been found on common and amiable grounds. There are many problems to be solved in medical and nursing care and there will be many more in the future. It is better that these be solved by mutual understanding and agreement whenever possible than by independent action and opposition.

PAUL S. HILL, JR., *Chairman*

Veterans Affairs Committee

There were no formal meetings of this committee during 1959.

By means of correspondence and personal communications between Doctor Lorrimer M. Schmidt, Chief of Outpatient Service of the V.A. facility at Togus, Maine, Dr. Daniel F. Hanley and myself, several minor increases were allowed. Such changes will be sent to each member of the Society after July 1, 1959, the renewal date of our contract.

From Washington headquarters of the Veterans Administration, Dr. Schmidt has forwarded the following information pertinent to any further changes in the existing fee schedules in the years to come.

"Whenever fees are proposed at a level in excess of those listed in a statewide fee schedule, adequate justification must accompany the submission of the Medical Association. To support proposed increments, factual evidence must be presented showing that requested adjustments do not exceed usual and customary fees. Data obtained by periodic surveys of fees

conducted by the constituent association will be acceptable to the Central Office. In addition, the recommendation of the Veterans Administration field station of jurisdiction of the proposal should be made in each instance."

In view of specificity of the above information it becomes apparent that this committee must be notified by any member of this Society who is in disagreement with the present fee schedule and who wishes to ask for any increase in any particular item therein. Such a request should contain such evidence based on the county level that said increase does not exceed the usual and customary fee of that area.

Such requests of fee increases should be presented in writing prior to October, 1959 so that the necessary evidence to fulfill the above-mentioned requirements can be assembled before December, 1959 and be submitted to Dr. Schmidt at the Togus Facility for discussion at this time.

WILLIAM C. BURRAGE, M.D., *Chairman*

(To be Continued)

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Maine Medical Association

STANDING COMMITTEES — 1959-1960

Standing Committees for 1959-1960 as proposed by the Nominating Committee and approved at the Second Meeting of the House of Delegates of the Maine Medical Association at Rockland, Maine, June 21, 1959.

Nominating Committee

- 1st District*, CHARLES R. GLASSMIRE, M.D., Portland
2nd District, WALTER G. DIXON, M.D., Norway
3rd District, JOHN F. DOUGHERTY, M.D., Bath, Chairman
4th District, OAKLEY A. MELENDY, M.D., Augusta
5th District, JAMES C. BATES, M.D., Eastport
6th District, ROBERT A. GRAVES, M.D., Fort Fairfield

Scientific Committee

- Daniel R. Shields, M.D., 369 Main St., Lewiston (1 yr.) — Chairman
 John A. Woodcock, M.D., 35 Second St., Bangor (2 yrs.)
 Sidney R. Branson, M.D., 37 Main St., South Windham (3 yrs.)

- Robert F. Russell, M.D., Penobscot (1 yr.)
 Frederick W. Skillin, M.D., 69 So. High St., Bridgton (2 yrs.)
 Wallace E. Viles, M.D., Turner (2 yrs.)
 Paul R. Briggs, M.D., Hartland (3 yrs.)
 S. Dunton Drummond, M.D., Bar Mills (3 yrs.)

Legislative Committee

- Charles A. Hannigan, M.D., 85 Goff St., Auburn (1 yr.) — Chairman
 John F. Andrews, M.D., 20 West St., Boothbay Harbor (1 yr.)
 M. Tieche Shelton, M.D., 21 Western Ave., Augusta (2 yrs.)
 Brinton T. Darlington, M.D., Westwood Rd., Augusta (2 yrs.)
 Philip Dachslager, M.D., 21 Western Ave., Augusta (3 yrs.)

Board of Ethics and Discipline

- William F. Mahaney, M.D., 338 Main St., Saco (1 yr.) — Chairman
 Karl V. Larson, M.D., East Machias (1 yr.)
 Forrest B. Ames, M.D., 255 Hammond St., Bangor (2 yrs.)
 Armand Albert, M.D., 193 Main St., Van Buren (2 yrs.)
 Isaac M. Webber, M.D., 29 Deering St., Portland (3 yrs.)
 William V. Cox, M.D., 133 Court St., Auburn (3 yrs.)

Medical Advisory Committee

- Thomas A. Martin, M.D., 203 State St., Portland — Chairman
 Gerald H. Donahue, M.D., 4 Station St., Presque Isle
 Philip L. Gray, M.D., Blue Hill
 C. Harold Jameson, M.D., Medical Arts Bldg., Rockland
 George L. Maltby, M.D., 31 Bramhall St., Portland
 James M. Parker, M.D., 18 Bramhall St., Portland
 Clement S. Dwyer, M.D., 205 French St., Bangor

Health Insurance Committee

- Waldo A. Clapp, M.D., 215 College St., Lewiston (1 yr.) — (Androscoggin)
 Clyde I. Swett, M.D., 18 Sherman St., Island Falls (1 yr.) — (Aroostook)
 Louis A. Asali, M.D., 29 Deering St., Portland (2 yrs.) — (Cumberland)
 Paul A. Fichtner, M.D., 6 Pleasant St., Rangeley (3 yrs.) — (Franklin)
 Robert F. Russell, M.D., Penobscot (1 yr.) — (Hancock)
 Kenneth W. Sewall, M.D., 2 School St., Waterville (1 yr.) — (Kennebec)
 Edward K. Morse, M.D., 22 White St., Rockland (1 yr.) — (Knox)
 Francis A. Winchenbach, M.D., 910 Washington St., Bath (2 yrs.) — Chairman (Lincoln-Sagadahoc)
 Linwood M. Rowe, M.D., 11 Franklin St., Rumford (3 yrs.) — (Oxford)
 Leonard G. Miragliuolo, M.D., 10 Maple St., Bangor (3 yrs.) — (Penobscot)
 Linus J. Stitham, M.D., 50 Main St., Dover-Foxcroft (2 yrs.) — (Piscataquis)
 Harland G. Turner, M.D., R.F.D. No. 2, Norridgewock (3 yrs.) — (Somerset)
 George L. Temple, M.D., 18 Franklin St., Belfast (2 yrs.) — (Waldo)
 Karl V. Larson, M.D., East Machias (3 yrs.) — (Washington)
 Alexander Magocsi, M.D., York (2 yrs.) — (York)

Committee on Medical Education and Hospitals

- Paul H. Pfeiffer, M.D., 14 Gilman St., Waterville (1 yr.) — Chairman
 William L. MacVane, Jr., M.D., 211 State St., Portland (1 yr.)
 Richard C. Wadsworth, M.D., 489 State St., Bangor (2 yrs.)
 Lawrence M. Weed, M.D., 489 State St., Bangor (2 yrs.)
 H. Carl Amrein, M.D., 29 Weston Ave., Madison (3 yrs.)

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 Eustache N. Giguere, M.D., 90 Webster St., Lewiston (2 yrs.)
 Joseph E. Memmelaar, M.D., 54 Forest Ave., Bangor (3 yrs.)
 Howard L. Reed, M.D., 68 Water St., Skowhegan (3 yrs.)

Rural Health Committee

- Howard H. Milliken, M.D., 105 Second St., Hallowell (1 yr.) — Chairman

Committee on Credentials

John F. Dougherty, M.D., 112 Front St., Bath (2 yrs.) —
Chairman
Paul A. Fichtner, M.D., 6 Pleasant St., Rangeley (2 yrs.)
George E. Sullivan, M.D., R.F.D. No. 1, Fairfield (3 yrs.)
Thomas Anton, M.D., 260 Main St., Biddeford (1 yr.)
L. Armand Guite, M.D., 45 Elm St., Waterville (1 yr.)

Delegate and Alternate to AMA

January 1, 1959 to January 1, 1961

Delegate — Philip P. Thompson, Jr., M.D., 704 Congress St.,
Portland
Alternate — Asa C. Adams, M.D., 68 Main St., Orono

News and Notes

Maine Doctor Publishes Book

Hans V. Mautner, M.D. of Pineland Hospital and Training Center, Pownal, is the author of a book entitled *Mental Re-*

tardation, physiological and clinical aspects. It is published by Pergamon Press, Inc., (280 pp. \$5.50). 1959.

National Institute of Health Grant

A grant of \$23,701.00 has been approved by the National Institute of Health to investigate "brain-liver relationship in abnormal conditions: a study of the metabolism of phenolic compounds and their metabolites in mental diseases." Investigators are H. D. Gruemer, M.D. and P. W. Bowman, M.D., Pineland Hospital and Training Center, Pownal and E. H. Frieden, Ph.D., The Boston Dispensary, Boston, Massachusetts. The study will cover a three-year period.

Five Maine Doctors Attend Seminar

Five Maine physicians attended a course in internal medicine at Peter Bent Brigham Hospital and Harvard Medical School. Attending were Drs. Paul H. Eddy, Camden; Peter F. Lansing, Togus; Harry Lapirow, Kennebunk; Laban W. Leiter, Portland, and Hadley Parrot, Bangor. The annual seminar is part of the Institute for Advanced Medical Study developed to help practicing physicians keep up with new developments in diagnosis and treatment of complicated diseases.

GONORRHEA AS AN INCREASING PROBLEM — *Continued from page 271*

nosis treatment of hospitalization is incurred by the Bureau of Health.

(Revised Statutes of Maine, 1944, Chapter 22, Sections 87-92)

when name and address must also be given so that public health workers can find the cases and get them under care.

Only in this way can the Bureau seek out those persons who are delinquent in their treatment. Persons who fail to name their contacts or see that these contacts are brought to the attention of medical practitioners are considered as "conducting themselves in such a manner as to be dangerous to the public health" and so should be reported by name and address.

It is well known that the diagnosis of chronic disease in males and acute or chronic disease in females is often difficult. Ordinary urethral and cervical smears are often negative and a false sense of security is obtained when diagnosis is made solely on the examination of these smears. When the clinical picture and history of exposure indicate that infection has probably taken place, full treatment should be instituted even in the absence of a positive smear. If facilities are available cultures should be taken and material from Skene's and Bartholin's glands should be obtained. It should be remembered that in early cases or cases inadequately treated smears may show only extracellular organisms.

The purpose of this paper is to bring to the attention of the medical profession the rising problem of venereal disease among our teenage population and to

point out some of the pitfalls in diagnosis and treatment. For a full discussion of the subject the reader is referred to the excellent articles by Nicholas J. Fiumara, M.D., M.P.H., Bernard Appel, M.D., William Hill, M.D., and Herbert Mescon, M.D.² appearing in the New England Journal of Medicine for April 23 and April 30, 1959.

Control of these diseases can best be accomplished by coordinated effort on the part of both private practitioners of medicine and public health workers. Promiscuity is the means of spread. Until our social values are changed, and promiscuity among our teenage children and young adults is reduced our young people are under constant threat of serious illness as long as undiscovered and inadequately treated cases of venereal disease are present in our communities. Modern treatment is effective when adequately applied. Let us hope that through it we can see a reversal of the present upward trend in the incidence of venereal disease. To paraphrase Thomas Parran, M.D., we must

Find (cases and contacts)

Treat (those infected or suspected of infection)

Teach (physicians, public health workers, patients and the public)

REFERENCES

1. VD Fact Sheet: Fifteenth Revision, U. S. Department of Health Education, and Welfare. Public Health Service, January 1959.
2. Fiumara, N. J., Appel, B., Hill, W., Venereal Diseases Today. New Eng. J. Med. 260: 863-868, 917-924, 1959.

FIRST INTERNATIONAL MEDICAL CONFERENCE ON MENTAL RETARDATION

Continued from page 265

- Professor of Pediatrics, University of Innsbruck, Innsbruck, Austria
- 4:00 *Prenatal Infections*
DR. J. SUTTER
Professor of Neuro-Psychiatry, University of Alger, Algeria
- 4:45 *Discussion*
Discussion leader: DR. H. MAUTNER
And Others

WEDNESDAY MORNING, JULY 29

- Chairman: DR. ASBJORN FOLLING, Tvedestrand, Norway
- 9:00 *Inborn Errors in Protein and Amino Acid Metabolism*
DR. R. S. PAINE
Associate in Pediatrics, Harvard Medical School, Boston, Massachusetts
- 9:45 *The Dietary Treatment of Phenylketonuria—Experiences Over the Last Nine Years*
DR. H. BICKEL
Privatdozent for Pediatrics, University of Marburg, Germany
- 10:15 *Lipid and Carbohydrate Metabolism and Mental Deficiency*
DR. P. B. DIEZEL
Privatdozent, Pathological Institute, University of Heidelberg, Germany
- 11:15 *Copper, Iron and Lead Metabolism and the Brain*
DR. J. N. CUMINGS
Professor of Chemical Pathology, University of London, England
- 12:00 *Serum Toxicity in Phenylketonuria*
DR. J. WORTIS, Director, and E. JACKIM, Research Associate, Division of Pediatric Psychiatry, Jewish Hospital, Brooklyn, New York
- 12:30 *Luncheon Period*

WEDNESDAY AFTERNOON, JULY 29

- Chairman: DR. ASBJORN FOLLING, Tvedestrand, Norway
- 2:00 *Chemical Basis of Phenylketonuria*
DR. J. N. CUMINGS
Professor of Chemical Pathology, University of London, England
- 2:30 *Tolerance Test in Phenylketonurics with p-Hydroxy Phenylpyruvic Acid*
DR. H. D. GRUMER
Biochemical Laboratory, Pineland Hospital, Pownal, Maine
- 2:50 *About Phenylketonuria*
DR. H. A. WAISMAN
Professor of Pediatrics, University of Wisconsin, Madison, Wisconsin
- 3:10 *Autonomic Responsiveness in Newborn and Older Children*
DR. E. W. GORDON, Psychology Supervisor and DR. J. WORTIS, Director, Jewish Hospital, Brooklyn, New York
- 3:30 *The Detection of Aminoaciduria in Retarded Children by a Simple Rapid Method*
DR. H. GHADIMI, Professor of Pediatrics, Shiraz University Medical School, Shiraz, Iran
- DR. H. SHWACHMAN, Associate Clinical Professor of Pediatrics, Children's Medical Center, Boston, Massachusetts
- 4:00 *Discussion*
Discussion leader: DR. H. MAUTNER

THURSDAY MORNING, JULY 30

- Chairman: DR. G. FRONTALI, Professor of Pediatrics, University of Rome, Italy
- 9:00 *Present Knowledge of the Pathology and Physiology of Mongolism*
DR. C. E. BENDA
Associate Professor, Clark University, Worcester, Massachusetts
- 9:45 *Etiological Aspects in Mongolism*
DR. J. OSTER
Chief, Pediatric Department, Central Hospital, Randers, Denmark
- 10:15 *Intermission for Exhibits and Films*
- 10:45 *Erythroblastosis and Mental Deficiency*
DR. W. W. ZUELZER
Professor of Pediatric Research, Wayne State University, Detroit, Michigan
- 11:30 *Kernicterus*
DR. H. S. BAAR
Pathologist, Pineland Hospital, Pownal, Maine
- 12:00 *The Central Nervous System in Congenital Heart Diseases*
DR. M. M. COHEN
Associate Professor, Division of Neurology, University of Minnesota, Minneapolis, Minnesota
- 12:30 *Luncheon Period*

THURSDAY AFTERNOON, JULY 30

- Chairman: DR. G. FRONTALI, Professor of Pediatrics, University of Rome, Italy
- 2:00 *Therapy in Mental Deficiency*
DR. K. KUNDRATITZ
Professor of Pediatrics, University of Vienna, Austria
- 2:45 *The Role of the Neurosurgeon in Treating the Mentally Deficient Child*
DR. J. M. TARLOV
Professor of Neurosurgery, New York Medical College, New York, New York
- 3:15 *Chromosomal Factors in Some Types of Intellectual Subnormality*
DR. P. E. POLANI
Director of Medical Research Unit, Department of Child Health, Guy's Hospital, London, England
- 3:45 *Infants' Vocalizations and their Significance*
DR. S. KARELITZ, Professor of Pediatrics, R. F. KARELITZ, and L. ROSENFELD, New York State Medical School, Downtown Branch, New York
- 4:00 *Discussion*
Discussion leader: DR. H. MAUTNER

FRIDAY MORNING, JULY 31

- Chairman: DR. A. MINKOWSKI, Director of Centre de Reserches Biologiques Néonatales, Paris, France
- 9:00 *Diagnostic and Therapeutic Aspects of Childhood Schizophrenia*
DR. L. BENDER
Principal Research Scientist, Child Psychiatry, State Department of Mental Hygiene, New York, New York
- 9:45 *Differential Diagnosis of Autism, Childhood Schizophrenia and Heller's Disease*
DR. C. E. BENDA
Associate Professor, Clark University, Worcester, Massachusetts
- 10:30 *Etiology and Treatment of Children in Atypical Development (Childhood Psychoses)*
DR. P. H. GATES

Senior Psychiatrist, James Jackson Putnam Children's Center, Boston, Massachusetts

11:15 *Mental Retardation as Part of the Training Program in Child Psychiatry*

DR. G. E. GARDNER

Director, Judge Baker Guidance Center, Boston, Massachusetts

12:00 *Behavior Problems in Brain Damaged Children*

DR. H. ASPERGER

Professor of Pediatrics, University of Innsbruck, Austria

12:30 *Discussion*

Discussion leader: DR. H. MAUTNER

1:00 *Closing Agenda*

Report of the Steering Committee of the Conference on future plans and decisions made as part of the proceedings of the Conference.

STEERING COMMITTEE

Howard V. Bair, M.D., Parsons, Kansas, *Chairman*

Hans Mautner, M.D., Pownal, Maine

Lawrence B. Slobody, M.D., New York, New York

Paul I. Yakovlev, M.D., Boston, Massachusetts

GENERAL OUTLINE OF THE SOCIAL PROGRAM

Monday, July 27

Garden Tour—Falmouth Foreside.

Social Hour, following general session, Eastland Hotel, for guests, members and families.

Tuesday, July 28

Conducted tour through the Portland Art Museum and the historic Sweat Mansion on High Street, Portland—as part of the Art Festival Week for this community.

Cocktail Hour, following the general session, as the guests of the Maine Branch of the English Speaking Union—Colonial Room, Lafayette Hotel, for speakers, sponsors and committee members.

Wednesday, July 29

Conducted tour of the Maine coastline from Cape Porpoise to York, as the guests of the York County Medical Auxiliary. Visits to museums and other spots of historical interest and beauty will be made. Tea at the Dan Sing Fan.

Wednesday Evening

Sunset Cruise and Lobster Dinner on Casco Bay.

Thursday, July 30

Tour of Greater Portland and Cape Elizabeth.

Announcements

American Urological Association

The American Urological Association offers an annual award of \$1,000 (first prize \$500, second prize \$300 and third prize \$200) for essays on the result of some clinical or laboratory

research in urology. Competition is limited to urologists who have been graduated not more than ten years and to hospital internes and residents doing research work in urology. The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at

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PHILIP BLINDER, M.D.
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the Palmer House, Chicago, Illinois, May 16 through 19, 1960. For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1959.

American Rhinologic Society

The American Rhinologic Society will hold its fifth annual meeting at the Belmont Hotel, Chicago, October 10, 1959. This will be preceded by a surgical seminar in the Illinois Masonic Hospital, Chicago, October 7 through 9, 1959. Kenneth H. Hinderer, M.D., Pittsburgh, president of the Society, will preside. For further information write to Robert M. Hansen, M.D., Secretary, 1735 N. Wheeler Avenue, Portland 12, Oregon.

Department of Health and Welfare Division of Maternal and Child Health Including Services for Crippled Children

Orthopedic Clinics

Portland — Maine Medical Center
9:00 a.m.: August 10, September 14
Lewiston — Central Maine General Hospital
9:00 a.m.: August 21, September 18
Rumford — Community Hospital
1:30 p.m.: September 16
Rockland — Knox County Hospital
1:30 p.m.: August 20
Presque Isle — Northern Maine Sanatorium
9:00 a.m. and 12:30 p.m.: September 8
Fort Kent — Peoples Benevolent Hospital
10:00 a.m.: September 9

Bangor — Eastern Maine General Hospital
1:00 p.m.: July 23, September 24 (Several will be two sessions)
Augusta — Augusta General Hospital
1:00 p.m.: August 27

Cardiac Clinics

Portland — Maine Medical Center
9:00 a.m.: Every Friday (Holidays excepted)
Bangor — Eastern Maine General Hospital
9:00 a.m.: August 14 and 28, September 11 and 25

Cleft Palate Evaluation Clinics

Portland — Maine Medical Center
10:00 a.m.: August 11

Pediatric Clinics

Bangor — Eastern Maine General Hospital
1:30 p.m.: July 24, August 28, September 25
Fort Kent — Peoples Benevolent Hospital
10:00 a.m.: July 22
Presque Isle — Northern Maine Sanatorium
1:30 p.m.: September 23
Waterville — Thayer Hospital
1:30 p.m.: August 4, September 1

Clinics for Mentally Retarded Pre-School Children

Waterville — Thayer Hospital
9:00 a.m.: August 5 and 19, September 2 and 16

Adolescent Clinics

Portland — Maine Medical Center
1:00 p.m.: July 22, August 26, September 23

POSTGRADUATE DIVISION TUFTS UNIVERSITY SCHOOL OF MEDICINE

Announces A Postgraduate Course REVIEW OF RECENT ADVANCES IN INTERNAL MEDICINE

October 5-10, 1959

At The
New England Center Hospital

THE FOLLOWING SPECIAL SUBJECTS WILL BE COVERED:

CARDIOLOGY: DR. SAMUEL PROGER, *Chairman*
KIDNEY & ELECTROLYTES: DR. W. B. SCHWARTZ, *Chairman*
ENDOCRINOLOGY: DR. E. B. ASTWOOD, *Chairman*
INFECTIOUS DISEASE: DR. LOUIS WEINSTEIN, *Chairman*
HEMATOLOGY: DR. WILLIAM DAMESHEK, *Chairman*
ALLERGY-PULMONARY DISEASE: DR. R. P. MCCOMBS, *Chairman*

FOR FURTHER INFORMATION WRITE:

Dept. F, Postgraduate Division, 171 Harrison Ave., Boston 11, Mass.

International College of Surgeons

The 24th annual congress of the North American Federation, International College of Surgeons, will be held in the Palmer House, Chicago, Illinois, September 13 through 17, 1959. The North American Federation covers the United States, Canada, Mexico, Cuba, Haiti, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. Surgical specialties to be represented are: colo-proctologic, neurologic, obstetric and gynecologic, ophthalmologic, otorhinolaryngologic, orthopedic, plastic and reconstruction, trauma and rehabilitation and urologic. There also will be surgical motion pictures, reports on advances in military medicine and a surgical nurses' program. The Congress will be held in honor of the Chicago Medical Society and in memory of John B. Murphy, Christian Fenger and Nicholas Senn, Chicago pioneers in surgery. Surgeons desiring to present papers should write to Peter A. Rosi, M.D., International College of Surgeons, 1516 Lake Shore Drive, Chicago 10, Illinois. For hotel reservations, write to the reservation secretary in care of the College at the above address.

Annual Otolaryngologic Assembly

The Department of Otolaryngology, University of Illinois College of Medicine announces two special postgraduate courses to be offered in the fall of 1959. The Annual Otolaryngologic Assembly will be conducted September 18 through September 26, 1959, and will consist of a series of lectures and panels concerning advancements in otolaryngology. Some of the sessions will be devoted to surgical anatomy of the head and neck and histopathology of the ear, nose and throat.

The course in laryngology and bronchoesophagology is scheduled November 9 through November 21, 1959.

Interested physicians should write direct to the Department of Otolaryngology, 1853 West Polk Street, Chicago 12, Illinois.

American College of Obstetricians and Gynecologists

Meetings for District I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and the Maritime provinces) of the American College of Obstetricians and Gynecologists are scheduled for September 3 through 5 at the Equinox House, Manchester, Vermont. Additional information may be had by writing to Duncan E. Reid, M.D., 221 Longwood Avenue, Boston 15, Massachusetts.

International College of Surgeons Postgraduate Courses

Two intensive two-week postgraduate courses in general surgery will be provided by the United States Section, International College of Surgeons, in cooperation with the Cook County Graduate School of Medicine. One will begin August 3 and the other November 2. Consideration will be given to surgical technic, surgical complications and management of the surgical patient, as well as to intensive review of the basic sciences in relation to clinical surgery. Tuition is \$150. Participants will be eligible for formal (category I) credit from the American Academy of General Practice. Apply to: Mr. John W. Neal, Registrar, Cook County Graduate School of Medicine, 707 South Wood Street, Chicago 12, Illinois, or to Ross T. McIntire, M.D., Executive Director, International College of Surgeons, 1516 Lake Shore Drive, Chicago 10, Illinois.



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Medical Director



The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, August, 1959

Number 8

President's Address*

EUGENE E. O'DONNELL, M.D.**

It has been traditional that the President should give a talk, if he wished, as a sort of a valedictory. The efforts of well-meaning friends of past-presidents to maintain a quorum in the General Assembly following the Scientific Session have not always met with success.

The prospect of this captive audience lends new enthusiasm for this somewhat jaded custom. Perhaps there is some instinctive quality within us which makes us feel that we would like to leave something behind us, whether money or other considerations.

It would seem a bit unfair if I failed to respond in some manner and give something of myself to these men who have worked so hard to make this association a success. Some of them have worked continuously for many years.

To Dr. Richard Dennis and the members of the Scientific Committee I extend my thanks for an excellent program. To Dr. Daniel Hanley for the devotion which he has given to our problems, a devotion which we have come to take for granted, and which has always gone beyond the call of duty, I am exceedingly grateful.

I extend my sincere thanks to Mrs. Esther Kennard for the work which she has done as Secretary-Treasurer of the association and in preparing the Journal for publication.

To you who are members of the Council and House of Delegates, who have so generously given of your time, and with whom I have been so proud to have been associated, I would like to present some of my thoughts, and in some cases conclusions, at which I

have arrived in regard to medical practice and the Maine Medical Association. You may accept or reject them as you wish. The opinions or even the firm convictions of a retiring president are of no particular consequence except to urge you to think for yourselves concerning the things which I will mention. They will not present a threat to the convictions of those who may be contrary-minded because they will not be espoused as a cause, except on the initiative of those who are the successors.

1. The Brunswick office:

I believe that the Maine Medical Association, through the efforts of Dr. Hanley and Mrs. Kennard, and with your help, is plowing back into the State of Maine a quantity and quality of public service which has never before been attained by any similar professional organization in this State. I believe that every man in the Maine Medical Association should visit the Brunswick office. Whether you wish to continue this activity and exploit it to its fullest capacity is for you to decide. Those who are not in sympathy should offer some alternative. Progress is not static; we will either go forward or backward.

2. The Journal:

I would like to remind you of the sad experience of the Medical Associations of New Hampshire and Vermont who discontinued their State Medical Journals and affiliated with the *New England Medical Journal*. Our Journal should continue to be a Maine Medical Journal and not a Tri-State Journal.

In my opinion, the hospital number program has about reached the end of its effectiveness. It should be supplemented by articles by invitation, arranged several months in advance and preceded by an outline or short summary. We might invite the Maine Dental Society to participate in this program. We should

*Presented at the 1959 annual session of the House Of Delegates of the Maine Medical Association.

**President, Maine Medical Association, 1958-1959.

promote the recording of the various staff group transactions. We should feature issues or numbers on various diseases, organs and systems. We should employ staff secretaries in various urban areas to record staff meetings and clinical conferences. We should increase the price of the Journal. Dr. Hanley should have an executive assistant.

3. Loans to Needy Medical Students:

The Medical Association of the State of New Hampshire has a plan by which many medical students are aided by the sale of bonds to physicians. We should study the advisability of such a plan and by the selection of an active committee, adopt a positive program in this regard.

4. The Associated Hospital Service:

The affairs of the Associated Hospital Service, whether Blue Cross or Blue Shield, are of vital interest to all of us and to the public in general. We have been very fortunate in the devotion which our Health Insurance Committee and the physicians who have served on the Board of Directors of this organization have given to this problem.

We should study our position concerning voluntary health agencies.

I believe that the Council should meet once each month and that the House of Delegates should meet four times each year.

I believe that a study of our table of organization is in order so that, if possible, no man should serve repeated terms on the Council, with the qualities of leadership which this implies, without being elevated to the Presidency, for whatever that is worth.

The alarming increase in malpractice cases in this state, and the disproportion in the insurance rates in Maine and New Hampshire, calls for a case study and the fixing of any responsibility which may be apparent. I would personally urge every man who is sued to employ his own attorney and pay him to work with the Council which represents the state association and the insurance company. I intend no discredit to the attorneys who are employed by us and the insurance companies. Experts are fine, but it is well to have the "family doctor" around. Some have felt that we should have a building in Augusta, or some similar central location. I am opposed to this plan at the present time for the following reasons:

1. Cost of construction
2. Cost of operation
3. The necessity for fixing the location of a state office
4. Reasons of public relations

I would like finally to say a few words about where

I stand in my concept of my duties as a physician and a member of this association. A few years ago this association voted to incorporate. Its charter states that it is incorporated under the laws of the State of Maine. The laws of this state, where they apply to human relations, like the laws of our country, are a part of the old Jewish law. They were re-affirmed over 1900 years ago by One whose birthday is celebrated on December 25th. They were re-affirmed again in the 13th century by the Magna Carta when it was shown that the King was subject to the law. They have nothing to do with whether you can buy a can of beer on Sunday but are based on natural and common law. The members of this association and the association itself exist only by the protection of these laws. This relationship is taken pretty much for granted until we stop to estimate what it has cost in lives and property to maintain it. We believe in the free world; that the state exists for the individual, and not the individual for the state.

By the same token, the Maine Medical Association exists for the people of the state and for its individual members. There is nothing in any non-communist creed of which I am aware which would deny me my constitutional rights or my duties as a citizen as I see them before God, and there is no power on this earth which has the right to examine my soul as to what my thoughts and motives are. I, therefore, recognize no authority within this association which would deny one of its members his constitutional rights. These, I believe, are the principles upon which this organization is based and upon which your governing body operates.

I offer these thoughts for your consideration because sometimes they may have to be re-affirmed. You and your successors, not I, will make the decisions of the future; and when you have made them, I can assure you that other problems will come forward to plague you, and that you will, oftentimes, learn a great deal from men of good will with whom you disagree.

As I look back upon this past year, it is with a feeling of futility because of the many things which I have failed to accomplish; but when I turn the page, I am proud of the things which you have done, both here and in your daily lives. After all, that is as it should be because it is your association. It will be, in the future, what you make it and if it ever becomes dominated by pressure groups, from whatever source they may arise, if it fails to serve the people first, the individual doctor second and itself last, it will go down the drain. No human institution is permanent, but let us make this one last as long as we can.

Safe Conduct Of Anesthesia For Tonsillectomy*

JOHN R. LINCOLN, M.D.**

In 1954 Doctor George O. Cummings published his observations of mortalities and morbidities following 20,000 tonsil and adenoidectomies performed in Portland, Maine, by many physicians in several hospitals during a span of thirty years.¹ Medical advances during the past ten years suggested the need for a reappraisal of our methods of management of anesthesia for children undergoing these operations, and restatement of some of the cardinal principles upon which the patient's welfare depends.

This discussion is based on our experience with the conservative vinethene-ether sequence, with ether-oxygen maintenance by insufflation for more than 5,000 tonsillectomies in children, performed in the hospitals which now make up the Maine Medical Center in Portland, Maine, over a period of approximately ten years. The basic anesthetic technique has changed but slightly from that observed by Dr. Cummings. There were no mortalities in the present series. One episode of cardiac arrest was promptly diagnosed, treated by thoracotomy and cardiac massage, and the patient made an uneventful and complete recovery. One seven-year-old child who required intubation developed laryngeal edema postoperatively and this complication required tracheotomy. The incidence of post-tonsillectomy hemorrhage requiring surgical intervention was, in general, inversely proportional to the average time required by the individual surgeon to accomplish the tonsillectomy; in other words, the more painstaking and meticulous the surgery, the lower the incidence of post-tonsillectomy hemorrhage.

Our exceptional good fortune in regard to mortalities and late morbidities in this group of patients has made us reluctant to adopt impulsively, new philosophies, new techniques, and new fads. It should be emphasized that our attitude in this regard is dictated by our experience, and not by smug complacency. Despite the overall safety of this humble, but time-honored method of anesthesia, however, we are still beset by the many old problems that have confronted anesthetists since surgeons first discovered the many ills that could be cured by tonsillectomy.

RESPIRATORY PROBLEMS

First in importance in maintaining the life and welfare of these children is the maintenance of adequate ventilation with an atmosphere containing a sufficient

concentration of oxygen. This problem is an old problem because no one has discovered a completely safe, completely satisfactory method of guaranteeing these respiratory requirements from start to finish. The use of endotracheal intubation has found favor with many and in the hands of the highly skilled anesthesiologist the incidence of significant trauma has been shown to be minimal.² In hospitals such as ours, however, where an active teaching program is in force, patients undergoing tonsillectomy furnish a substantial proportion of the neophyte's training and experience with inhalation anesthesia. Although immediate supervision is possible during the early phases of this training, it is neither possible nor advisable to provide *immediate* supervision right up to the time the trainee becomes *highly skilled*. Where there is a close working relationship between the otolaryngologist and the anesthetist, it is usually possible to maintain excellent ventilation throughout tonsillectomy without reliance on an endotracheal tube. Trendelenberg position which allows the accumulation of blood in the nasopharynx, away from the airway, and the frequent intermittent use of good suction further protect the airway. In rare instances where the airway cannot be maintained to complete satisfaction, — and this includes the patient who persistently phonates, crows, or snores, — an endotracheal tube is indicated, and the anesthetist should have the necessary equipment, of suitable size and sterility, at hand.

As children approach 100 pounds in weight, it becomes more difficult for the anesthetist to maintain a satisfactory airway, and an even level of anesthesia, without the help afforded by an endotracheal tube. Children over 100 pounds are almost routinely intubated. Reserving routine intubation for these larger children enables the anesthetist to employ a tube which is not a tight fit in the glottis, and thereby minimizes the opportunity for trauma during insertion, and irritation from pressure on the laryngeal mucous membrane during maintenance of anesthesia. In younger children, if an endotracheal tube is necessary, it must be fairly snug to maintain an adequate lumen for the airway, and prevent excessive resistance to breathing. Endotracheal tubes should be washed thoroughly with a soap containing hexachlorophene and rinsed well in running tap water immediately prior to use, unless they have been stored in the sterile state.

In spite of pressures to "get the next case started," it is exceedingly important to make a thorough appraisal of the airway after tonsillectomy has been completed. This includes listening to the chest for blood or mucous in the tracheobronchial tree or absence of

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**Director of Anesthesia, Maine Medical Center, Portland.

ventilation in one or more lobes of the lung. It is common practice in our hospital to stimulate cough with a #14 French catheter, and if this is not possible, or a cough does not completely clear the airway, to expose the glottis and suction the trachea under direct vision.

We have the good fortune to be completely equipped with recovery room stretchers, which can be placed in Trendelenberg position. All patients who have had tonsillectomies leave the operating room in Trendelenberg position, lying in the right lateral decubitus position. If a special stretcher is not at one's disposal, one can use a pillow under the dependent hip and lower thorax, to give dependent drainage to the trachea.

Oxygen as a medium for insufflating ether was used empirically many years ago; some of us felt that this practice unnecessarily exaggerated the hazard of explosion, and elected to use room air, delivered by a manual or mechanical compressor. The studies of Faulconer and Latterell,³ which revealed significant falls in the partial pressure of oxygen under the mask of a patient receiving open drop ether, and significant parallel falls in arterial oxygen saturation, have led us to abandon our more or less theoretical objections to combining ether with oxygen, and we now add oxygen routinely from the moment of induction until completion of the operation. If the ether mask is not equipped with an oxygen nipple, a catheter can be placed beneath the mask, and oxygen provided at flow rates of 500 to 1,000 cc. per minute. During maintenance of anesthesia, flow rates of four to six liters per minute are employed, with a Richardson vaporizer delivering the ether-oxygen mixture to a hook placed in the corner of the patient's mouth. The explosive potential of these mixtures should be recognized, and approved precautions taken.⁴ If the surgeon prefers a head mirror to an approved head lamp, a satisfactory enclosed vapor-proof lamp may be inexpensively provided.⁵

CIRCULATORY PROBLEMS

Accepted surgical and anesthesiological standards include routine urinalysis and determination of blood hemoglobin concentration before any general anesthetic. Adults with less than 11.0 grams per cent of hemoglobin (less than 70% of the normal value) are not acceptable for elective operations, and should receive effective therapy to correct anemia. Children under five years of age have normal hemoglobin values of 11.5 to 13.2 grams per cent, and we consider levels below 9.5 to 10.0 grams per cent dictate postponement of elective surgery.

The commonest circulatory problem we have encountered during anesthesia for tonsillectomy has been bradycardia, usually occurring during the first ten or fifteen minutes of anesthesia. The fall in pulse rate usually occurs suddenly, and may be extreme; we have not infrequently seen a pulse of 140 fall suddenly to a level of 60 beats per minute. Clinical signs of hypoxia

have not been present. Conventional doses of atropine in the preoperative medication do not prevent the development of bradycardia. The most plausible explanation of this phenomenon is that the irritation of the trachea and bronchi by ether vapor stimulates a pulmonary-cardiac (vago-vagal) reflex.⁶ Sudden bradycardia is felt to be a very serious circulatory disturbance, and if not treated promptly may lead to cardiac arrest. It is our routine practice to tape the diaphragm of a stethoscope over the precordium before beginning anesthesia for these children, and to listen to the heart constantly during the induction and at least the early phases of anesthesia maintenance. Molded plastic ear pieces are more comfortable than the standard stethoscope, but they must fit perfectly the individual anesthesiologist in order for heart sounds to be distinct and clear. Prompt treatment of bradycardia consists of removing the ether vapor completely, and allowing the child to breathe room air or oxygen; as soon as a normal pulse is reestablished, anesthesia can be resumed, and bradycardia seldom recurs.

The possibility of cardiac arrest should be anticipated whenever a general anesthetic is administered, and a sharp knife for performing thoracotomy should be an intrinsic part of every surgical setup. Of course, general anesthesia should never be administered in the absence of a good apparatus for suction, and an efficient method of providing oxygen by intermittent positive pressure for resuscitation.

PSYCHOLOGICAL PROBLEMS

It has long been recognized that general anesthesia may produce or intensify emotional disorders in children, as manifested by night terrors, increased emotional lability, or development or increase in such behavior patterns as bed-wetting, thumb-sucking, destructiveness, or temper tantrums.^{7,8} The knowledge that these disturbances may last for weeks or even months, has been a matter of deep concern to anesthesiologists everywhere for many, many years. Efforts to meet the problem by the use of depressant medications alone, have not met with complete success; toxic doses must be employed if psychic trauma is to be eliminated in every case. Pentothal,[®] administered by the rectal route, was disappointing to us because of prolonged postoperative sleeping. Various combinations of barbiturates with Compazine,[®] or Phenergan,[®] failed to produce a uniform degree of sedation in safe dosage, and postoperative restlessness was common. Narcotics, such as morphine or Demerol,[®] have been objected to because of their depressing effects on protective reflexes, notably the cough reflex; with a well-staffed recovery room, however, these objections become less important, and we have found Demerol combined with Seconal,[®] both administered by the intramuscular route, to be highly satisfactory drugs for premedication. A dose of Seconal of approximately 1 mg. per pound of body weight is administered intramuscularly ninety minutes before op-

eration, and intramuscular Demerol in a dose of 0.5 mg. per pound is combined with an appropriate amount of atropine and administered 60 minutes before operation. When these children arrive at the operating room, they are quiet and tranquil, though not asleep. Induction is usually achieved without the objecting and fussing which we observed before we began using Demerol. Respiratory rate is somewhat slower than previously, but this does not seem unduly to delay induction. No premedication, short of basal anesthesia, however, can be considered a substitute for a sympathetic, understanding and self-assured anesthetist.⁸ A few minutes spent obtaining the confidence of the child is time well spent, and is a small price to pay for a tranquil, nontraumatic induction, whether it be with vinyl ether, high flow rates of nitrous oxide and oxygen or even intravenous pentothal. If an open nitrous oxide induction technique is to be used, we feel that it should be combined with at least 20% oxygen to prevent hypoxia and cyanosis.

POST-TONSILLECTOMY HEMORRHAGE

Management of anesthesia for control of post-tonsillectomy hemorrhage is fraught with hazards, unless the anesthetist recognizes the special problems inherent in the situation. A determination of hemoglobin or hematocrit should be obtained, when time permits, and appropriate transfusion therapy instituted if the level of hemoglobin is below 9.5 grams per cent, or the hematocrit is below 30. An infusion should be started in any case. If the patient has not already recently emptied his stomach by vomiting, vomiting should be induced by catheter stimulation of the pharynx before induction of anesthesia, with the table in steep Trendelenberg position. If bleeding is brisk, a bite block between the molar teeth helps to assure a pathway for effective suction during induction. The postoperative recovery room is not the proper place for management of these emergencies. To the busy and impatient surgeon, this may seem to be unreasonable; however, he will have little reason to object if the patient is moved by a skilled attendant into a nearby operating room as soon as a significant degree of postoperative hemorrhage is suspected. There the surgeon, on arrival, can perform his examination and plan treatment while a sample of blood is drawn, an infusion started, and the necessary preparations for a definitive procedure are being made. We found this system to be an effective means of avoiding complete disruption of recovery room service to other patients, and it has been graciously accepted by our otolaryngologists.

SUMMARY

1. In our ten-years experience with approximately 5,000 tonsillectomy anesthetics, the conservative Vine-thene-® ether sequence has been quite satisfactory.
2. Endotracheal anesthesia is reserved for patients whose airways are unsatisfactory, and for older children weighing 100 pounds or more.
3. Attention to the airway must extend beyond the actual operation, to the recovery room, and until the patient is awake.
4. Additional oxygen should be provided during induction and maintenance to maintain normal arterial oxygen saturation.
5. Cardiac action should be monitored constantly, especially during induction and early maintenance; a diaphragm-type of stethoscope receiver meets this requirement admirably.
6. Every surgical setup should include a sharp knife for thoracotomy, in case of cardiac arrest.
7. Conservative preoperative medication which includes Demerol provides a satisfactory tranquil state. Psychic trauma will be at a minimum provided the anesthetist is both sympathetic and competent.
8. Post-tonsillectomy hemorrhage deserves special anesthetic management, and should never be dealt with in the postoperative recovery room.

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22 Bramhall Street, Portland

Evaluation Of Cardiac Murmurs In Children*

EDWARD C. MATTHEWS, M.D.**

Various studies have indicated that the incidence of cardiac murmurs in the general pediatric population is in the range of 50 percent. Accordingly, evaluation of the significance of cardiac murmurs is almost a daily problem for the practitioner who deals regularly with children. The vast majority of such murmurs are properly and usually easily classified as "innocent." There will be a number of patients in whom the murmur is clearly indicative of a structural cardiac abnormality and still others in whom there is doubt as to the significance of the murmur. The actual incidence of congenital heart disease is difficult to determine. Estimates indicate that approximately 30,000 children are born annually in the United States with congenital cardiac abnormalities, and of this number approximately 70 percent survive beyond the first year of life. If one adds to the group of children with congenital heart disease those youngsters with murmurs resulting from acquired heart disease, it is clear that in every pediatric practice there will be an admixture of pathologic with innocent murmurs. While there are many children in whom a distinction between the innocent and pathologic murmur is not urgent, there are a number of cases in which early identification and appropriate treatment of organic heart disease may significantly reduce subsequent morbidity and may even be life saving. This is particularly true in children who have suffered a previous undiagnosed attack of rheumatic fever with residual cardiac damage. Failure to identify the cardiac murmur and to institute penicillin prophylaxis in such children exposes them to the risk of recurrent rheumatic fever with increased cardiac injury.

Of the wide variety of innocent murmurs audible in children, there are four types which are more or less distinct and which are most commonly confused with organic murmurs. The first of these is the "venous hum" — a continuous murmur, often with diastolic accentuation, which is of maximal intensity in the neck and below the medial portion of the right clavicle. The murmur increases in intensity with the patient in the erect position and is accentuated by inspiration. This murmur, which appears to have its origin in the jugular veins, may, on occasion, be quite loud with radiation over the pulmonic area. Occasionally it is confused with the murmur of patent ductus arteriosus from which it can be readily differentiated by the fact that it is much reduced or even completely obliterated by manual pressure over the jugular venous system.

The murmur can likewise be altered by extension or rotation of the head. The venous hum is a commonly encountered murmur if it is sought but is often of such low intensity that it is overlooked.

A second type of innocent murmur is a grade 1 to 2 systolic murmur heard over the pulmonic area. This murmur may vary with position of the patient and with respiration. The heart sounds are normal. The murmur must be distinguished from that of significant pulmonic stenosis but the distinction is made not so much on the quality of the murmur as on the associated evidence of hemodynamic abnormality. A mild degree of pulmonic stenosis may be associated with a loud systolic murmur while severe pulmonic stenosis, in the presence of congestive heart failure, may result in a soft murmur. Clearly the "innocence" of the murmur depends not so much on its intensity as on the degree of the stenosis and the concomitant effects on the right ventricle. Perhaps all pulmonic systolic murmurs indicate at least some degree of relative pulmonic stenosis, but only a minority of these requires specific treatment.

The third type of innocent murmur heard in children is a systolic murmur located over the lower precordium midway between the left sternal border and apex. This murmur is low pitched, of short duration, and has a vibratory quality which has been likened to a twanging string. This murmur may be difficult to distinguish from that of rheumatic mitral insufficiency but is characteristically coarser and of shorter duration than that of mitral insufficiency. It is maximal inside the apex and does not radiate to the axilla.

The fourth type of innocent murmur is occasionally heard in early infancy. This murmur is systolic in time, of maximal intensity along the lower left sternal border with radiation over the precordium. The murmur is usually soft but occasionally may be of grade 3 intensity and may be indistinguishable from that of ventricular septal defect. This murmur is unassociated with any evidence of cardiac disability or electrocardiographic change and is properly classified as innocent if, over a period of months, it gradually diminishes in intensity.

In addition to these more or less characteristic innocent murmurs, one commonly encounters short, usually soft, systolic murmurs resulting from the tachycardia of fever, anemia, or exercise. These murmurs disappear when the underlying cause of the tachycardia is corrected and are easily identified as insignificant in themselves. These same factors leading to tachycardia may accentuate a pre-existing innocent murmur or

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**Pediatric Cardiologist, Maine Medical Center, Portland.

may alter the murmurs of organic heart disease, and accordingly one is ill advised to try to make a definitive evaluation of a cardiac murmur particularly in the presence of fever or anemia.

While the murmur is often the presenting sign of heart disease, it is clear that the murmur itself is perhaps the least significant of all the manifestations of the cardiac abnormality. The type of murmur present may serve to indicate whether the individual has structural heart disease or not and is of great importance in ar-

riving at a diagnosis of a specific structural abnormality, but the murmur will rarely indicate the extent of the underlying hemodynamic abnormality. Murmurs become significant insofar as they reflect a structural change in the heart which significantly influences cardiac function. Accordingly a murmur is best classified as innocent or pathologic according to the seriousness of the hemodynamic abnormality which it reflects.

131 Chadwick Street, Portland

Problems In Urology*

HUGH P. ROBINSON, M.D.**

Interest in problems in urology varies from year to year as in any field of medicine. There are several current problems which are worthy of consideration at this time. However, I have selected a single subject which I hope will be of some long term interest to most of the practitioners here today. This is the unglamorous and ever-present problem of urethral stricture. This problem continues to confront us frequently. It still demands the active participation of the physician for therapy, namely, the dilatation of the urethra with sounds. Sometimes this is accomplished with facility but more often with exasperating difficulty not to mention the discomfort to the unfortunate patient. This problem is particularly disturbing to the urologic surgeon since most strictures encountered today are the result of overzealous or improper instrumentation of the urethra rather than the late effect of the gonococcus as is so popularly believed.

What then do we need to know about this problem so that we can improve our treatment of strictures or preferably prevent strictures entirely. We need to establish a basic definition of what is normal and what is abnormal. We need to understand the normal anatomy and the pathologic process involved in the formation of strictures. We need to be aware of the changing etiologic factors which produce strictures.

DEFINITION

Let us turn to the definition of a urethral stricture. Urethral stricture is poorly defined in the literature. It is commonly thought of as a simple narrowing of the lumen. More precisely, it is any decrease from normal in the size, elasticity, or distensibility of the urethra.

ANATOMY

Grossly, the urethra is divided into two parts, namely, the anterior and the posterior urethra. The anterior urethra consists of the meatus and the navicular, pendulous, scrotal and perineal portions. The posterior urethra consists of the membranous or sphincteric portion and the prostatic portion.

Microscopically, the urethral lumen is lined by a thin layer of transitional epithelium. In the anterior urethra it is only a few cells thick and rests directly on the surrounding fibroelastic tissue of the corpora. In the posterior urethra, on the other hand, the epithelium rests directly on the musculo-glandular substance of the urinary sphincter and the prostate gland. The posterior urethra is also considerably more distensible than the anterior portion. In addition the urethra of the posterior portion communicates with many deep lying glandular elements in the prostate. Its physiologic behavior to trauma might be compared to the skin at this point. The epithelium of the skin is pierced and is confluent with many deep lying glandular elements, namely, the hair follicles and the sweat glands. Superficial abrasions or burns of the skin and the posterior urethra are rapidly re-epithelialized with cells migrating out of the lumens of the deep lying glands. In this manner the mucosa is quickly re-established and scarring from deep infection is minimized. The anterior urethra unfortunately lacks any such protective mechanism which may explain the predominance of strictures in this portion. Posterior urethral strictures will be mentioned only briefly in this paper.

ETIOLOGY

Etiologically, there are two types of urethral strictures, namely, congenital and acquired. Congenital strictures are frequently located at the meatus and are easily treated with simple dilatation in the newborn and

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**Urologist, Maine Medical Center, Portland.

by meatotomy in later life. Less frequently they will be found at the vesical neck where they produce symptoms much like those of prostatic obstruction. Transurethral resection or open plastic repair will afford relief. On the other hand, congenital strictures of the pendulous urethra are rare.

Years ago most acquired strictures were caused by the late scarring effects following infection with the gonococcus. This organism rapidly destroys the thin layer of urethral mucosa, penetrates into the periurethral tissues and results in a dense circular contraction in the potentially constrictive fibro-elastic tissue about the urethra.

More recently overdilatation with circumferential tearing and abrasion of the urethral mucosa by instruments which are unsuspectingly too large for the urethra has caused the majority of the strictures seen today. This may in particular follow transurethral prostatic resection because of the prolonged back and forth motion of the instrument in a narrow urethra during surgery. It has been estimated that 20% of urethras cannot tolerate standard size operating instruments. The standard size operating scopes are 27-28 F in calibre. Assuming a little extra room for easy movement of the instrument it is apparent that the urethra should be in excess of 30 F in size to prevent abrasion during surgery.

In the past perineal urethrotomy has been suggested as a method of by-passing the stricture area but surgeons have been reluctant to do this. In many cases postoperative urethral strictures may be unavoidable. It is disturbing to all concerned to perform a transurethral resection for prostatic obstruction only to have further obstructive symptoms recur again for another reason, namely, urethral stricture.

Let us now turn to what is the normal size of the urethra. The normal calibre of the urethra is not adequately defined in the standard textbooks. Post mortem studies are inadequate because fixation with formalin destroys the normal elasticity and distensibility of the urethra. Clinical measurements when done with sounds are also frequently inadequate. With the normal tapered sound only a gross idea of the true size of the urethra can be obtained. Minor degrees of stricture or resistance in the passage of the sound may be lost or not accurately located. Many times the urologist has passed a number 30 F sound prior to the introduction of the resectoscope to assure adequate calibre only to observe later, after the resection is in progress, that the scope has become snug in the urethra and moves with difficulty. In this case a minor unsuspected stricture may become a major one postoperatively.

The urethra can be accurately calibrated with the Otis bulb. This is a malleable wire with varying size olive shaped tips. A decided jump or resistance can be felt as the bulb passes through a narrow or strictured area. The exact size, location, and number of strictures can be accurately identified in this manner.

Emmett¹ has presented a clinical study of a large number of patients who underwent transurethral procedures. The urethras of 1,824 patients were calibrated preoperatively. 1,420 patients or approximately 80% had urethras which were greater than 30 F in calibre. Postoperative stricture is not expected and rarely occurs in this group.

The remainder of the group had urethras 30 F or less in calibre. All patients who had urethras of 26-30 F in calibre had no past history of urethral infection or instrumentation. On the other hand, one half of the patients with urethras of 24 F calibre and all patients with urethras of less than 24 F in calibre had a definite past history of urethral infection or previous instrumentation. Emmett therefore concluded that the normal size urethra is 26 F or greater.

Therefore for clinical purposes, we have three groups of patients: first, patients with normal urethras of greater than 30 F in calibre in whom the resectoscope is passed easily and in whom postoperative stricture is not expected; second, patients with urethras of 26-30 F or normal size but inadequate for the resectoscope in whom urethral strictures can be anticipated in some cases; and third, patients with urethras less than 26 F which are smaller than normal and require forceful dilatation to allow passage of the resectoscope in whom stricture can be expected in many cases.

It should be mentioned that the above data applies to the urethra proper and not to the meatus. The meatus is frequently smaller in calibre and incidentally the most common site of postoperative stricture.

Urethras of greater than 30 F in calibre should tolerate standard size instruments. Urethras of 30 F or less in calibre are candidates for stricture formation.

PREVENTION OF URETHRAL STRICTURE

Now having established what is the normal size of the urethra, what can be done to prevent strictures in potential candidates. As has been mentioned the incidence of gonorrheal strictures has decreased in recent years. This is due in part to vigorous antibiotic therapy which quickly eradicates the gonococcus before the mucosa can be destroyed. It might be further observed that urethral instillation and instrumentation is also being done less in this group than formerly.

Postoperative strictures, however, remain a problem of considerable magnitude. Meatotomy has been done for years to prevent bothersome meatal strictures. Meatotomy with the scalpel as is usually done may be inadequate for enlarging a tight meatus if the narrow area is in the navicular portion rather than at the extreme tip.

Some enthusiasm has recently been given to internal meatotomy and internal urethrotomy with the Otis urethrotome. As is so often the case in medicine there is nothing new under the sun. Internal urethrotomy was done at the turn of the century but was abandoned because of sepsis and bleeding. These are no longer prob-

lems with antibiotics and large catheter splinting. The Otis urethrotome is a bivalved dilator on one side of which there is a knife blade which can be withdrawn through the strictured or potentially strictured area.

Emmett has recently had considerable experience with the Otis urethrotome. His technique requires an incision in the 12 o'clock position along the roof of the urethra into the fibrous septa between the corpora. This procedure is not done in anticipation that the urethra will heal in an enlarged state but that a temporary relaxation of the urethra can be accomplished without causing circumferential tears in the mucosa as is the case when dilatation is done with sounds. The instrument then will move easily during resection and will not cause abrasion of the mucosa. Although the urethra does in general heal to its preoperative calibre, occasionally it heals to an increased calibre.

The procedure is as follows. The meatus is calibrated. If the meatus is 30 F or less an internal meatotomy is done to 32 F. The urethra proper is calibrated. If the urethra is 30 F or less an internal urethrotomy is done to 36 F. Care is taken that the knife does not enter the membranous urethra and cause damage to the urinary sphincter.

Emmett has presented long term follow up studies on patients who had internal urethrotomies. You will remember that 80% of patients did not require urethrotomy. 345 patients who had urethras 26-30 F in calibre or urethras which might be considered normal in size but which might be potential candidates for stricture formation had internal urethrotomy. Follow up data was available on 270 patients. 267 of these patients had urethras of normal calibre postoperatively and had no complaints. Three patients who had no complaints, nevertheless, had minor strictures of 18-22 F. The incidence of stricture is considerably lower than past experience has shown.

59 patients who had urethras of 24 F or less had internal urethrotomy to allow introduction of the scope. Follow up data was available on 50 patients. The preoperative calibre was maintained in 41 or 82% of cases. Among these 41 cases it is interesting to note that there were 14 patients whose urethras healed to a calibre larger than the preoperative state. This group is the one in which severe postoperative strictures are expected to develop in a majority of cases. The problem has not been solved by any means but it has been greatly improved.

In general internal urethrotomy has proved an encouraging method in the prevention of postoperative

strictures. Unfortunately, no large series of controls is available for comparison. However, personal observation of cases where careful calibration of the urethra is done and internal urethrotomy performed when indicated has shown an impressive decrease in the incidence of stricture formation.

TREATMENT OF URETHRAL STRICTURE

Although as is the case in many things an ounce of prevention is worth a pound of cure we still have to deal with the unfortunate patient who has a urethral stricture at the present time. Regular dilatation with sounds continues to be the treatment of choice. Gentleness in instrumentation, the use of filiform leaders, gradual increase in the size of sounds over a period of time, and accurate calibration with bulbs to evaluate progress is essential.

Newer methods of treatment continue to be suggested. Transurethral injection of cortisone directly into the strictured area has been done. Internal urethrotomy with prolonged catheter splinting is currently being tried. A sufficiently large series of cases is not available as yet for proper evaluation. In more severe cases, urethraplasty or even urinary diversion may be necessary.

SUMMARY

In summary, the ever-present problem of urethral stricture has been reviewed. The normal and the strictured urethra have been defined. The change in etiology from infectious disease to instrumentation has been noted. The pathological process has been described pointing out the susceptibility of the anterior urethra to stricture formation. The use of the Otis bulbs has been encouraged for more accurate calibration of the urethra. Finally, the technique of internal urethrotomy has been discussed. The optimistic results of its use in the prevention of postoperative stricture has been encouraging.

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29 Deering Street, Portland

The Diagnosis Of Abdominal Pain*

MORRILL SHAPIRO, M.D.**

INTRODUCTION

In the diagnosis of abdominal pain, as in nearly all other conditions, a good complete history, whenever feasible, is the initial important step in helping to make the diagnosis possible. A careful examination naturally is equally necessary.

Inspection of the normally scaphoid abdomen will quickly determine the presence of diffuse peritonitis or perforated viscus, for example, where the abdomen is held in a rigid fixed position. Distention or visible masses, as well as enlargement of intra-abdominal organs, are also notable.

Gentle palpation for elicitation of pain, tenderness, rigidity or spasm, percussion for evaluation of increased air or fluid, and auscultation of diminished, absent or increased bowel sounds are methods with which we are all familiar and are mentioned merely for emphasis. Rectal examinations should never be omitted.

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**Surgical Staff, Maine Medical Center, Portland.

LOCATION AND TYPE OF PAIN

Refer to Table 1 and Table 2

In the final analysis, many factors must be considered in making a diagnosis; the consistence and persistence of symptoms, the presence of tenderness with rebound, character of the bowel sounds, appearance of the patient, and the manner in which these manifestations change over a period of a few hours.

Diseases requiring early surgical intervention are acute appendicitis, acute cholecystitis, acute intestinal obstruction, incarcerated and/or strangulated hernia, ectopic pregnancy, perforating lesions of the gastrointestinal tract, mesenteric vascular occlusion, splenic rupture, torsion of pedicle of intra-abdominal tumor, ruptured gallbladder, rupture of an intra-abdominal abscess, and spontaneous intra-abdominal hemorrhage.

APPENDICITIS

In considering the causes of abdominal pain, the diagnosis of appendicitis would be correct in many cases on the basis of probability alone. The pain of appen-

TABLE 1.—DIFFERENTIAL DIAGNOSIS OF LOWER ABDOMINAL PAIN*

	ACUTE APPENDICITIS	URETERAL OBSTRUCTION	ACUTE SALPINGITIS	ECTOPIC PREGNANCY	DIVERTICULITIS
Age	Usually under 40	Under 40	Under 40	Under 40	Over 40
Sex	Both	Both	Female	Female	Male
Pain	Epigastric, shifts to R.I.Q., constant with exacerbations	Severe, knifelike, begins in lumbar area, radiates to groin, scrotum, thigh; dysuria, frequency	Dull, constant, both L.Q.; recurrent attacks; jarring painful; backache; dysuria	Sharp, knifelike	Dull-cramping; L.L.Q. pain; diarrhea+
Menses	—	—	No change or menorrhagia	Missed or scanty period; 15-25% have no irregularity	—
Temperature	99-100 F. before perforation	Normal	99-102 F.	Normal	99-101 F.
Tenderness	Localized R.L.Q. Rebound	Costovertebral; none in abdomen	Bilateral L.Q.; suprapubic; rebound	Unilateral L.Q.; rebound	L.L.Q.; rebound; mass+; mild distention+
Pelvic exam.	Tenderness high on right	—	Exquisite tenderness on movement of cervix; profuse purulent discharge	Cervix moderately tender to movement; bloody discharge (dirty brown)	—
Laboratory	Hematuria 6%; normal sed. rate; leukocytosis	Hematuria; no leukocytosis	Skene and Bartholin positive for gonococcus; sed. rate elevated	Aschheim-Zondek may or may not be positive; cul-de-sac puncture—blood	Leukocytosis
X-ray	No help	See stone on flat plate 85%; I.V. pyelogram helps	No help	No help	No help unless barium x-ray previously showed diverticulosis

* It should be emphasized that the data in this table represent usual findings and are not to be construed dogmatically.

dititis is one of the few beginning without prodromata, is continuous and severe, occasionally colicky (in 10% of cases) sometimes with intermittent exacerbations, between which there is a constant dull ache aggravated by moving or walking. It is initially in the epigastrium or periumbilical area radiating later to the right lower quadrant.

Anorexia is usually present, and vomiting is often absent. When present, however, vomiting follows the pain and the ingestion of water or food. Constipation is common, diarrhea and chills are not.

Tenderness is second only to pain as a constant and dependable feature of acute appendicitis, localizing itself to a small area in the right lower abdomen. Rebound is often present, but this is subjective evidence and must be carefully evaluated, especially in children and older patients. Rectal examination may reveal an abscess on many occasions.

CHOLECYSTITIS

The most prominent symptom is pain, gradual in onset if due to an inflammatory process, or sudden if a stone is impacted in the cystic or common duct. Pain begins three to four hours after a meal, usually in the

epigastrium later shifting to the right upper quadrant. It is severe and constant, increasing slowly to a peak of severity, and recurring as soon as the effect of analgesics disappears. In approximately 50% of patients there is radiation to the interscapular or right infra-scapular region.

Vomiting is variable, intense nausea is usual. Tenderness localizes to the right upper abdomen unless the gallbladder becomes distended, forming a palpable mass in 36 to 48 hours.

INTESTINAL OBSTRUCTION

Early incomplete small bowel obstruction can exist with very slight distention since the proximal bowel is being decompressed by vomiting. Vomiting is severe and almost continuous with high obstructions. It should be emphasized that in the diagnosis of acute abdominal pain all measurable degrees of distention, however slight, are significant.

The increase of peristaltic sounds is extremely important in the diagnosis of intestinal obstruction. Sounds may be increased in the early stages, but will disappear later, especially if peritonitis develops. When present, they are typically high-pitched.

TABLE 2.—DIFFERENTIAL DIAGNOSIS OF UPPER ABDOMINAL PAIN*

	ACUTE APPENDICITIS	ACUTE CHOLECYSTITIS	PERFORATED PEPTIC ULCER	ACUTE PANCREATITIS	PLEURISY AND PNEUMONIA	CORONARY OCCLUSION
Age	Usually under 40	Over 40	30-50	30-50	Any age	Over 40
Sex	Both	Female, fat	Rare in females	Females predominate	Both	Male
Pain	Epigastric, shifts to R.L.Q.; constant, with exacerbations	Severe, radiates to back and shoulder; requires morphine; relieved by anti-spasmodic	History of ulcer in 60-75%; sudden onset, intense, constant pain, requires morphine	Sudden onset after large meal; severe, constant; radiates to back; requires morphine	In upper abdomen, not localized; relieved by splinting respiratory muscles	Lancinating; radiates to left shoulder and arm
Vomiting	Exception, but always anorexia	Reflex, may be much retching	Not prominent	Always	Exception	Reflex
Appearance	Not acutely ill until peritonitis	Worn because of pain	Acutely ill; keeps abdomen immobile; shocklike	Acutely ill; shocklike if necrosis	Restless; may have grunting respirations	Dyspneic, cyanotic, very restless, sweating; B.P. subnormal
Temperature	99-100 F.; higher after perforation	99-102 F.	Subnormal	Subnormal at onset, later variable	100-103 F.	Normal to subnormal
Tenderness	Localized R.L.Q.; rebound	Localized R.U.Q.	Diffuse, more in upper abdomen; board-like rigidity; absent bowel sounds	Epigastric; rebound; bowel sounds decreased	Epigastric, inconsistent; no rebound; no restriction of abdominal respiratory movement	Upper abdomen but changeable and inconsistent
Laboratory	Leukocytosis usual	Leukocytosis	Leukocytosis	Serum amylase elevated; glycosuria occasional	High leukocytosis	Leukocytosis; E.C.G. very helpful
X-ray	No help	May show stones or non-visualization of gallbladder	Free air in 85% 4 hrs. after onset	"Sentinel loop" of small bowel	Chest x-ray diagnostic	No help

* It should be emphasized that the data in this table represent usual findings and are not to be construed dogmatically.

Frequently little or no gas-distended bowel may be seen on a supine x-ray film, but with the patient upright, fluid levels are noted—an unmistakable indication of stasis.

Absence of bowel movements is not an early symptom of obstruction. There may be diarrhea in a partial block, and even after a complete block, contents distal to the lesion must evacuate.

Obstructive pain is cramping, coming in waves of rhythmic periodicity and free intervals between paroxysms. At the peak of each pain an obstructive (high-pitched tinkle) bowel sound may be heard.

HERNIA

Incarcerated hernias are irreducible, and if they contain bowel, produce all symptoms of intestinal obstruction. Later, if impairment of blood supply to incarcerated viscera occurs, strangulation ensues. Richter's hernia, where only a portion of the bowel wall is caught, may produce symptoms of strangulation without initial evidence of obstruction. Strangulation is also common in femoral hernias, (which can be frequently overlooked in an obese person), and should be suspected if the pain is constant, severe, and the overlying skin is red, inflamed and edematous. The diagnosis of strangulation can be made with certainty only at surgery, hence all incarcerations should be treated by surgery immediately.

ECTOPIC PREGNANCY

This possibility exists in all women of childbearing age who have lower abdominal pain.

PERFORATING LESIONS OF COLON

Slowly perforating cancer or diverticulum of the sigmoid produces left lower abdominal pain and tenderness. Differentiation between these two is often difficult even at surgery, and we must look to the pathologist for help. The patient with diverticulitis has a longer history of constipation and bowel disturbance, showing no weight loss, as contrasted with carcimoma, where there is a story of recent bowel disturbance, weight loss, and anemia. Bleeding is common to both, but more typical of neoplasm. Similar lesions in the cecum produce symptoms identical to appendicitis.

MESENTERIC VASCULAR OCCLUSION

Abdominal pain may be present for days or weeks, producing nausea, vomiting, and diarrhea, just prior to the final acute episode. When part of the bowel becomes devitalized, pain becomes intense, changing from intermittent colicky to a continuous agonizing type. Diarrhea and constipation are common, the latter due to the ileus. Shock is a late and very serious sign.

The lack of abdominal rigidity in the presence of exquisite diffuse abdominal tenderness is a striking finding. Peristalsis ceases and distention occurs quickly in most cases, but the latter is not as extreme as in

mechanical obstruction. There is no tympany, because of the fluid and blood in the intestine. X-rays lack diagnostic features.

Diagnosis is based on the following:

1. Previous attacks of phlebitis or existing cardiac irregularity (fibrillation, etc.)
2. Abdominal discomfort with constipation or diarrhea
3. Severe abdominal pain out of proportion to physical findings and difficult to relieve with opiates
4. Tenderness without rigidity
5. Slight temperature rise
6. Blood on rectal exams

Perforation of an intra-abdominal viscus is marked by sudden onset of intense, diffuse abdominal pain, tenderness, rebound, absent peristalsis and prostration. Peptic ulcer, ruptured gallbladder, intra-abdominal abscess, splenic rupture (spontaneous or traumatic) and spontaneous intra-abdominal hemorrhage enter this category.

It is extremely important for one to approach surgery cautiously in abdominal pain associated with acute respiratory infections, acute enteritis, rheumatic fever, malaria, sickle-cell anemia, lead poisoning, porphyria, periarteritis, diabetes mellitus, acute pancreatitis, urinary tract disease or coronary occlusion. In all of these there is accompanying abdominal symptomatology which may merely be secondary to the underlying disease. As a corollary to this, however, I personally have seen cases of acute appendicitis and measles occurring concurrently; therefore, it is important to keep in mind the possibility of surgery in spite of, or, in association with, the so-called "medical entities."

Mention should be made of regional ileitis and Meckel's diverticulum. The former is a chronic granulomatous disease involving the terminal ileum and "skip" areas proximal to the main lesion. Intestinal colic, slight distention, borborygmi and occasionally a right lower quadrant mass are noted. Young people are affected, and, because of chronic diarrhea and melena, nutrition is poor. Chronic partial obstruction is common.

The clinical symptoms of Meckel's diverticulum are more often those of small bowel obstruction than inflammation, usually caused by kinking of the intestine over a band between the tip of the diverticulum and the abdominal wall. The pain varies in character and location, the preoperative diagnosis most often being appendicitis.

Hemorrhage is common in children under 2 years, but recurrent attacks of abdominal pain and melena suggest a Meckel's. The bleeding may frequently be bright red and massive enough to lower the blood count, a fact distinguishing this entity from intussusception.

In conclusion, let me re-emphasize the importance of a careful history, adequate physical examination and a

deliberate evaluation of all the salient features from both. This is, indeed, the most reliable method of reaching a reasonable conclusion in the clinical differential diagnosis of abdominal pain.

REFERENCES

1. Requarth: The Diagnosis of Acute Abdominal Pain. Year Book Publishers, 1953.

29 Deering Street, Portland

1959 Annual Session Golf Tournament

The following list of prizes and contributors is evidence of the support given to the Maine Medical Association by these various concerns, in addition to their participation in the Technical Exhibit. We take this opportunity to say "Thank You" to these contributors and to all other companies included in the Technical Exhibit.

<i>Prizes</i>	<i>Contributed by</i>
Clock	Abbott Laboratories
Case of Alkalol	Alkalol Company
Golf balls	Brewer & Company, Inc.
Clock	Burroughs Wellcome & Company
Golf shoe horn and brush set	Ciba Pharmaceutical Products
Golf balls	Eaton Laboratories
Golf pin and silver ash tray	Geo. C. Frye Company
Emergency surgical kit	Geigy Pharmaceuticals
No. 11 iron	Lederle Laboratories
Golf balls	Eli Lilly and Company
Putter	Maine Medical Association
Golf score keeper	Wm. S. Merrell Company
Barometer	P. J. Noyes Company
Silver candle snuffer and bracelet	Ortho Pharmaceutical Corp.
2 medical kits	Parke, Davis & Company
Scotch	Pfizer Laboratories
Golf balls	William H. Rorer, Inc.
Scotch and Bourbon	The Samoset
"Current Therapy"	W. B. Saunders Company
Silver salt and pepper shakers and compote	Surgeons' and Physicians' Supply Company
2 Zippo lighters	The Upjohn Company
2 sets cuff links and tie bar	U. S. Vitamin Corporation

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The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Editorial

Project Hope

A unique concept in the field of international health has been inaugurated recently by the People-to-People Health Foundation, the corporate entity of the Committee on Medicine and the Health Professions of the People-to-People Program.

The foundation is in the process of raising \$3,500,000 to staff and outfit the mothballed Navy hospital ship *Consolation* as a floating medical center to be sent on a year's visit to Southeast Asia.

The project's efforts will be primarily directed toward bringing the latest techniques and skills developed by the American medical professions to the medical and paramedical personnel in the Far East in their own environment, adapted specifically to their own needs and their way of life.

Intended as a concrete expression of the concern felt by the people of the United States for the people of other nations, the project will be neither a "do-good" nor a one-sided program. Dr. William B. Walsh, the project's head, expects the knowledge and experience gained by the American medical staff to be immensely valuable.

The ship will be staffed with both permanent and

rotating medical personnel. Some 15 physicians, expert in various fields of medicine and surgery, two dentists, 20 graduate nurses and 20 technicians will spend a full year with the ship. The remainder of the medical personnel will consist of volunteer units of generalists and specialists who will be flown to the ship for tours of four months. While some of the rotating personnel will remain with the ship, many will use the vessel as a logistic base to support their work inland with mobile units.

The project's success will depend solely on the support of individuals, corporations, foundations and, perhaps most important, the American medical profession. The American Medical Association and the American Dental Association have publicly endorsed the plan and have pledged generous financial support.

Although a lack of time precludes an extensive appeal to the public at present, widespread individual support is necessary. If every practicing physician contributed to this venture, few, if any, other funds would be needed. Donations — which of course, are tax deductible — may be sent to Project HOPE, P. O. Box 9808, Washington, D.C.

Across The Desk

Global Health

The rush of dozens of Senators and Representatives, Republicans and Democrats alike, to put their names on a bill authorizing this country to send a fleet of doctors, nurses and sanitarians to stricken foreign lands is solid evidence of the increasing attention of Congress to the use of medical care as a political tool. Majority of bill's backers are northern liberals.

The Senate-passed bill to step up U. S. support of international medical research, another example of the health-for-peace philosophy, is still nowhere near a vote in the House but chances of passage before adjournment are not bad.

Still another manifestation of Congressional preoccupation with health-for-peace is the alacrity with which both House and Senate are routing toward passage a bill whose purpose is to permit Federal agencies to donate overseas surplus property to hospitals, medical schools and health centers under foreign flags.

Enactment of this bill will clear the way for Defense, State and other executive departments to donate millions of dollars worth of equipment and supplies which have been declared surplus.

Some idea of the volume of surplus property given away by the government is gained by the following. During the fiscal year that ended June 30, 1959, the Department of Health, Education and Welfare *alone* distributed among health, educational and civil defense institutions surplus items whose acquisition value was \$360,455,981.

Forand Bill Stopped

The House Ways and Means Committee has put aside until next year the so-called Forand bill which is opposed vigorously by the medical profession.

IRS Loses Tax Decision Affecting Group Clinics

First, Internal Revenue Service lost its fight to deny pension plan privileges to medical partnerships (U. S. vs. Arthur Kintner, M.D., WRMS Nos. 450 & 541). Now it has suffered another loss in a similar case. In Dallas last week, Federal Judge T. Whitefield Davidson ruled that physician members of an association established to operate a clinic are taxable as though the unit were a corporation.

Thus, partners will not have to pay income tax on undistributed profits as individuals; these will be taxed, rather, as corporate profits as a result of decision in the Southwest Clinic Association case. Note: More than two years after the Kintner decision, IRS has not yet decided upon criteria of a medical association for tax purposes.

Studies Continue On Wax Cartons As Carcinogens

Both Public Health Service and Food and Drug Administration are proceeding with investigations of possible carcinogenicity of waxes used in containers for milk and other foods. At his midweek news conference, Secretary Flemming reviewed progress since PHS launched its first study nearly three years ago.

"Results . . . have been reviewed by scientists of both the Public Health Service and the Food and Drug Administration," the Cabinet member said. "I am advised that the findings are not final but no indications of a health hazard have been found."

Service-Connected Bills For Veterans Pass House

Passed by House last week and sent to Senate for action: HR 267, which specifies that multiple sclerosis diagnosed within three years of separation from military service shall be considered service-connected for pension and medical treatment purposes; HR 271, which fixes a 5-year service-connection deadline for Hansen's disease.

Paralytic Poliomyelitis 100 Per Cent Over 1958

Public Health Service reports 956 cases of paralytic poliomyelitis through July 18 this year, compared with 437 cases in the same period of 1958. During the week ended July 18, states reporting the largest number of paralytic cases were Missouri and Texas, 20 each; Alabama, 15, and Tennessee, 12.

Lightning Protection, First Aid Rules Told

Many lightning victims die needlessly because others hesitate to touch them, fearing their bodies are electrically charged.

Actually, lightning current passes out of the body immediately and enters the ground. Prompt artificial respiration may save a victim whose breathing mechanism is paralyzed by the high-voltage current.

Other first aid tips for lightning victims, as well as rules for avoiding being struck by lightning, are listed in the (August) *Today's Health*, published by the American Medical Association.

Lightning strikes the earth an average of more than eight million times a day during the course of 44,000 electrical storms. It kills about 500 Americans each year, and injures another 1,500. Nine out of 10 victims are hunters, sportsmen, vacationers or farmers.

When a person is struck, he frequently experiences violently contracted muscles, the article said. This can be relieved by rubbing the limbs upward. A victim should not be allowed to become chilled. Burns, which

new... highly effective tranquilize

Comparison of TENTONE usefulness



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LEDERLE

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◆ Positive, rapid calming effect in mild and moderate cases.
◆ Striking freedom from organic toxicity, intolerance, or sensitivity reaction—particularly at low dosage. ◆ Greater freedom from induced depression or drug habituation. ◆ May be useful, as with other tranquilizers, to potentiate action of analgesics, sedatives, narcotics. ◆ Facilitates management of surgical, obstetric, and other hospitalized patients. ◆ Indicated when more than a mild sedative effect is desired...and less than psychosis is involved. ◆ Dosage range: *In mild to moderate cases:* from 30 to 100 mg. daily. *In moderate to severe cases:* from 75 to 500 mg. daily.

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often occur beneath metal objects such as coins carried by the victim, may need medical attention.

Lightning holds little danger if a person takes the following simple precautions, the article said:

—If you have any choice, choose a shelter in the following order; a large metal or metal-frame building; a building which is protected by proper rodding against lightning; a large, unprotected building; a small unprotected building.

—If you are in an isolated spot and have to remain outdoors, try to reach a ravine, ditch, cave, or other depression in the ground; a thick grove of trees; the foot of a cliff, or the inside of an automobile.

—As a last resort, lie flat on the ground.

—Avoid hilltops; isolated trees; riding a bike or a horse; towers, overhead wires, or outdoor clotheslines; wire fences; wide, open spaces such as pastures or golf courses; small isolated sheds; small boats, water, beaches; tractors or plows; horses or cattle.

—Do not be the highest object in the area, since lightning tends to strike whatever is projecting highest from the ground in the immediate vicinity.

—Indoors, keep away from screen doors, fireplaces, metal objects and pipes projecting through the wall or roof, electric light circuits, open windows, electrical appliances and objects that are grounded.

Being struck by lightning is like receiving an electric shock, the article said. Unless it is a severe shock, it need not be fatal. One Frenchman was struck five times and died in his old age of pneumonia.

New Treatment Outlines For Esophageal Lye Burns

The serious consequences of swallowing lye can be prevented by the use of antibiotics and artificial hormones, two Delaware doctors reported today.

In fact, the treatment—combining tetracycline and prednisone—produced “uniformly good” results in 13 children who had swallowed lye-containing substances.

Lye, which burns the esophagus when swallowed, is the fifth leading cause of poisoning among those under 19 years of age, Drs. Charles L. Miller and Robert O. Y. Warren, Wilmington, said in the (July 25) *Journal of the American Medical Association*.

After the lye is swallowed, the esophagus becomes swollen and inflamed, which interferes with swallowing. This is followed by a period of normal swallow-

ing until scar tissue gradually forms and obstructs the esophagus. Untreated, the esophagus completely closes and the patient dies of dehydration and starvation.

Until recently treatment consisted of surgery or the mechanical opening of the esophagus.

Now the daily oral doses of antibiotics and steroids help heal the burns and prevent the development of scar tissue.

The antibiotic is used to prevent infection in the burned area. Prednisone, a derivative of cortisone, speeds healing through its effect on the glandular system, which controls the body's reaction to such stresses as burns.

Feeding tubes were used for the first three days. After that the children ate soft diets for three weeks before returning to general diets.

None of the 13 children showed any narrowing of the esophagus after treatment. Follow-ups three months to three-and-a-half years later also showed no subsequent narrowing.

In conclusion, the doctors said, “Despite the fact that the more severe consequences of lye ingestion can be averted with proper and early treatment in most cases, it is still a serious problem.

“The real answer lies in the field of prevention, especially through dissemination to the public of information about the dangers inherent in leaving poisonous substances within the reach of children.”

Simple Paper Test Shows Antibiotic Effectiveness

A piece of paper that turns red under certain situations can now be used by doctors to decide what antibiotics to give for an infection.

The simple test involves the use of filter paper impregnated with a chemical that turns the paper red when bacteria grow on it. It is described in the (July 25) *Journal of the American Medical Association*.

The test works this way: The filter paper is divided into several areas. Small quantities of individual antibiotics are placed in each division. Then the paper is swabbed with infectious material taken from the patient. The paper is sealed in a plastic bag and heated.

If an antibiotic inhibits the growth of the bacteria causing the infection, the paper remains white. But if an antibiotic does not work against the bacteria, the bacteria grow and the paper turns red.



ALLAN WOODCOCK, M.D.

Bangor

President, Maine Medical Association

1959-1960

Allan Woodcock, M. D.

President, Maine Medical Association

1959-1960

Allan Woodcock, M.D. assumed his duties as President of the Maine Medical Association at the close of the 106th annual session on June 23, 1959. Dr. Woodcock has previously served as President-Elect, as Councilor from the Sixth District, as Chairman of the Medical Advisory Committee for several years and on several other committees. The Association is fortunate to have this dedicated man at its helm.

Dr. Woodcock was born in Bangor on May 29, 1891, the son of Elizabeth Christian and Galen M. Woodcock, M.D. He was educated in Bangor Public Schools, received his B.A. from Bowdoin College in 1912 and his medical degree from Bowdoin Medical School in 1915. In 1916 he interned at the Eastern Maine General Hospital in Bangor and was a resident physician at the New York Orthopaedic Hospital in 1917. Dr. Woodcock has since had postgraduate education at Harvard.

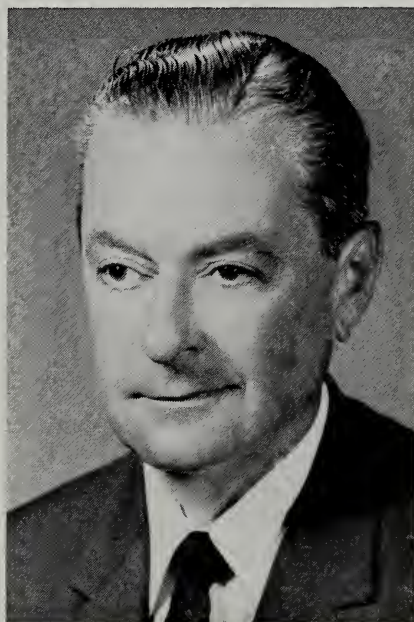
In World War I, Dr. Woodcock served in the Medical Corps and attained the rank of Captain. Upon his return he began his medical practice in Bangor where he has remained to date. He has been on the staff of Eastern Maine General Hospital since 1915 and is on the consulting staff of several other hospitals in Maine. Dr. Woodcock is the recognized dean of orthopaedic surgery in the State of Maine.

Married to the former Priscilla Crosby of Bangor, they have a daughter, Sally Pierce, and two sons, Allan Woodcock, Jr. and John A. Woodcock, M.D.

The 106th Annual Session Of The M. M. A.



Wilson H. McWethy, M.D., Augusta
President-Elect



John F. Dougherty, M.D., Bath
Councilor, Third District



Ernest W. Stein, M.D., Pittsfield
Councilor, Fourth District

What has been repeatedly earmarked as one of the Association's most successful conventions was held at The Samoset on June 21, 22 and 23. A total registration of 662 members and guests breaks all previous records.

The Program proceeded as scheduled and attendance at all sessions was excellent. The many specialty group meetings on the closing day of the session were a worthwhile feature of the meeting.

Two hundred and thirty-five members and guests were present at the Sunday evening dinner meeting when Dr. William B. Walsh, President of Project Hope, The People-to-People Health Foundation, was the speaker. And, on Monday evening four hundred were present at the annual banquet. Mr. Paul K. Niven, Jr., CBS Foreign News Correspondent, was the guest speaker for this occasion. Those of you who were present can testify to the excellence of both of these speakers.

The Clam Bake, the final event of the session, featured the presentation of golf prizes which are listed on page 297. A picture of one group enjoying the "Bake" appears on page 307.

HOUSE OF DELEGATES

Here again the attendance was excellent and attentive.

Both meetings of the House were held on Sunday, June 21, the first at 10:00 A.M. and the second at 2:00 P.M. The presiding officer was Allan Woodcock, M.D. of Bangor and Dr. Stitham served as parliamentarian. At the first meeting reports were presented by

the Executive Director, Dr. Hanley, the Council Chairman, Dr. McWethy, the Councilors, the delegate to A.M.A., Dr. Philip P. Thompson, Jr., delegates to out-of-state meetings and chairmen of Standing and Special Committees. (Dr. Thompson's report was published in the July issue of the Journal, Councilor reports in this issue of the Journal, and committee reports in the June, July and August Journals. The stenographic record of the proceeding at the House of Delegates is on file at the Association's headquarters where it is available to any interested members.)

A portion of Dr. Hanley's report, which we feel will be of interest to every member, follows:

"This is a comparative study of what has happened to your finances since 1955.

"In 1955, you had cash on hand in the banks of \$22,000. On May 31, 1959, you have \$53,000.

"Your total assets in 1955 were \$48,000. Your total assets in 1959 are \$89,000, or almost \$90,000. It is not double, but there it is.

"Your liabilities in 1955 were \$3,297. In 1959, the total liabilities were \$5,000.

"Those four figures, I think, are interesting. The assets have increased from \$48,000 to almost \$90,000, and the liabilities have increased from \$3,000 to \$5,000.

"The Journal, in 1955, brought in \$13,000. In 1959, it brought in \$32,000, almost \$33,000.

"Investments, as I told you earlier, have gone up from \$700 to a little over \$1,000.

"The total income for the Society in 1955 was

\$39,000 plus; it has gone up to \$75,000. Again, in the vicinity of double.

"There is just one other set of figures that I want to give you. I am referring to your administrative expense. You hear a lot about this sometimes. In 1955, it was \$16,000 plus. In 1959, it is \$24,000.

"Your Journal expense in 1955 was \$12,000, and it is \$25,000 in 1959.

"When I got through presenting these to another group, the Council, one of the members said to me: 'Well, what does it mean?'

"I think that it means this: any way you want to slice it, you are running and you are responsible for the running of an organization where, if you include the health and accident insurance premiums that come through the office, runs well over \$100,000. This is a responsibility that you have, and one that you should look into. I think that you men, as Delegates, should come by the office and see what goes on there. You ought to look into your budget very carefully. I think if you will look over your budget, those figures that I have given you, it will show that you have increased your capital assets from \$48,000 to almost \$90,000, while it has cost you about \$8,000 to do it.

"There is an item in the budget that you have before you that shows your net income to be \$14,000. Immediately, someone will look at this and feel that it is \$14,000 profit. Remember, this \$14,000 figure shows up and has already been allocated in this way: \$1,043 to the Loan Fund; \$1,500 has to go into your Legislative Council's budget, as authorized by this House and set up by this House two years ago; \$2,000 has gone into what is known as a Reserve Fund, and \$6,000 has gone into a Building Fund.

"There will be some small amount that is left over; the figuring is too complicated to say just what it amounts to, but it comes to about \$26.00 and it will go into next year's A.M.A. Delegates' Fund.

"This, then, leaves you something in the order of \$3,500 instead of \$14,000 that you have, really, in excess of your yearly budget."

The following budget for 1959-1960 as drawn up by the budget committee, Drs. Carl E. Richards and Philip P. Thompson, Jr., approved by the Council and presented at the Interim Meeting, was approved.

Estimated income from State Dues, Journal Advertising, Subscriptions and Exhibit Space Rentals is \$70,920. Income from investments, approximately \$1,100, will be used for special projects of the Association. (The Auditor's Report for 1958-1959 was published in the June issue of the Journal.)

Association

Office Expenses

Salaries:

Executive Director	\$10,000.00
Secretary-Treasurer	3,000.00
Stenographers (2)	6,750.00

Travel - Exec. Dir. & Sec.-Treas.	2,000.00
Supplies, telephone, rent, payroll taxes, etc.	4,000.00
Equipment	1,000.00
General Expenses	
President's Expenses	1,000.00
Annual Session & Int. Meet.	
House of Delegates	3,500.00
Council	650.00
Committees:	
Medical Advisory (Legal Counsel)	1,000.00
Legislative Counsel	1,500.00
National Education & Public Relations	500.00
Other Committees	
Standing & Special	1,500.00
Delegates:	
American Med. Ass'n. (Dels. & Alts.)	1,200.00
New England States & New Brunswick	400.00
New England Council Dues	100.00
Fall Clinical Session	500.00
Annual Roster	250.00
Woman's Auxiliary	325.00
New York Blood Bank	100.00
Journal:	
Printing & Plates	22,000.00
Travel	400.00
Office:	
Salaries	
Secretary-Treasurer	2,000.00
Stenographer	3,000.00
Supplies, postage, rent, etc.	1,400.00
Prizes	300.00
Insurance	100.00
Retirement Fund	2,400.00
Totals:	<u>\$70,875.00</u>

A proposed revision in Article VI of the Constitution that the Alternate Delegate to the A.M.A. be a member of the Council of the M.M.A. (as presented at the Interim Meeting and published in the April issue of the Journal) was approved; i.e., Article VI now reads:

"The Council shall consist of the President, President-Elect of the Association, Executive Director (if a member of the Association), Secretary-Treasurer (if a member of the Association), the immediate Past President, the delegate and alternate delegate to the American Medical Association, and one Councilor from each Councilor District. Seven members shall constitute a quorum."

Dr. Martyn A. Vickers, of Bangor, who represents the New England States on the A.M.A. Council on Legislation, was present at this meeting and presented a brief outline of his duties in this office.

At the second meeting of the House, the report of the

Nominating Committee whose duty it is to "present candidates for members of the Standing Committees where there is to be a vacancy . . ." was presented and approved. (This report is on page 279 of the July Journal.)

The House reaffirmed and ordered continued action on the resolution approved in June of 1958 that the Maine Medical Association "recommend to all hospitals in the State having Maine Medical Association members on their staff, the purchase of liability insurance in order to protect themselves against possible negligence of hospital employees."

The A.M.A. recommendation that a liaison committee be set up to work with the hospital association was discussed and it was recommended that this duty be added to those of the now existing Committee on Medical Education and Hospitals.

It was voted that the Council of the M.M.A. shall conduct a study of the advisability of employing an administration assistant to the executive director of the M.M.A. and publish its findings and recommendations in the Journal prior to December 15, 1959. Such report is to include a breakdown of present executive director duties and those of the proposed assistant.

The President's Address by Dr. Eugene E. O'Donnell, which appears on page 285 of this issue of the Journal, was presented at this meeting.

A motion "that this House of Delegates refer to the Legislative Committee the suggestion that they introduce a bill in the next Legislature to the effect that in Maine there should be established one educational standard in the field of medical practice, administered by a single licensing board" was approved.

It was voted "that the Penobscot County Medical Society or Dr. Richard C. Wadsworth, investigate the possibility of setting up a Poison Control Center in the Bangor area."

It was voted that the Legislative Committee and the Maine Medico-Legal Society be instructed to investi-

gate thoroughly the feasibility of submitting at the next State Legislature a bill requiring that appointed medical examiners be required to take a course in medical-legal medicine, prior to taking office — expenses to be paid by the State. Furthermore, that they be instructed to report their findings to the next meeting of the House of Delegates.

The annual report of the Woman's Auxiliary was presented by the retiring President, Mrs. Linus J. Stitham.

And, at this meeting, Dr. Ernest W. Stein, of Pittsfield, was elected Councilor for the Fourth District, Kennebec, Somerset and Waldo Counties, and Dr. John F. Dougherty, of Bath, Councilor for the Third District which includes Knox and Lincoln-Sagadahoc Counties.

GENERAL ASSEMBLY

Wilson H. McWethy, M.D., of Augusta, was elected President-Elect of the Maine Medical Association at the General Assembly on Monday afternoon, June 22.

The following out-of-state delegates were introduced:

Massachusetts Medical Society:

Dr. Harry Blotner, Boston

Dr. John R. Shaughnessy, Salem

Rhode Island Medical Society:

Dr. Frank J. Logler, Newport

New Brunswick Medical Society:

Dr. F. L. Whitehead, Riverside

At this meeting Dr. O'Donnell urged the members to visit the Technical Exhibits "a fundamental part of our meeting."

COUNCIL ORGANIZATION MEETING

Dr. Carl E. Richards, of Alfred, was elected Chairman of the Council for 1959-1960, at this meeting which was held on Monday, June 22. Dr. Hanley was re-elected Executive Director and Editor, and Mrs. Kennard, Secretary-Treasurer and Business Manager.

More about the Council proceedings in the September Journal.



Seated: Dr. and Mrs. Stitham with Sean, Kevin and Mark.
Standing: Patricia Harvey, Cheryl Stitham and Susan Stitham.

Maine Medical Association

Councilor Reports — 1958-59

First District — CARL E. RICHARDS, M.D.

I have attended several monthly meetings in Cumberland County and all bi-monthly meetings in York County. Both societies are in a healthy condition.

Attendance at meetings could be better but methods of improving it are elusive. Most of the meetings had a good social hour, excellent food and an outstanding speaker. The business part of the meetings in both counties has been sketchy and more time should be allotted to the business of medicine. York County has voted recently to have one or two meetings a year devoted entirely to the business of the county and state societies, public relations and medical practice.

Second District — JAMES A. MACDOUGALL, M.D.

As Councillor for the Second District, I hereby submit a short summary of the activities as seen by me over the past year in the counties mentioned within the district.

On October 8, 1958, a combined meeting of Oxford and Franklin Counties was held at the Bethel Inn at which business relative to the welfare of both county medical societies was discussed. Another such meeting is planned for the 17th of June at Saddleback Camps which will be beyond the deadline for this report.

I was less fortunate in my attempts to visit the Androscoggin County group inasmuch as two dates pin-pointed for that pleasure had to yield to the exigencies of local practice; however, I availed myself of the invitation to attend the Guest Evening at Poland Spring House on May 17th, where a measured melange of conviviality and business made it good to be there. I feel that I should compliment the secretary of that county for his diligent attention to notices of meetings.

Third District — ROBERT L. ALLEN, M.D.

Building programs have been the main items in the tri-county area embracing the Third District. The Knox County General Hospital in Rockland has recently completed a new \$1,025,000 wing complete with new laboratory and x-ray facilities and a new operating suite. The old building is being remodeled completely which will give a 95-bed modern hospital unit when completed later this summer.

The Camden Community Hospital has embarked upon a \$450,000 building program which when completed will see a new modern 25-bed hospital.

In Boothbay Harbor a \$750,000 building project is under way which will give them a modern 36-bed hospital capable of expansion to 50 beds.

Bids are out for a \$750,000 wing to be added to the Bath Memorial Hospital together with complete renovation of the old plant. This will give an additional 64 beds. The Hyde Home is likewise planning a \$100,000 addition to its present plant. Both construction projects are due to start this summer.

These new hospitals will likewise be complete with new operating suites, laboratories and x-ray facilities.

The Lincoln-Sagadahoc and Knox County Medical Societies have held monthly meetings throughout the year with many out-of-state and local speakers who have contributed much to the furtherment of medical education of the physicians in this area.

Fourth District — WILSON H. MCWETHY, M.D.

Since the last annual meeting, things have been remarkably serene in the Fourth District. If there has been any disturbance in professional relationships, the Councilor has not been informed. There have been no unusual professional complaints to the County Societies in this District as far as the office of the Councilor has been concerned. There have been a minimum of malpractice suits and none of them serious. The Grievance Committee has had very little to do, on the whole. It has been a quiet year as far as problems have been concerned and I leave the office with a sense of deep gratitude to the physicians in the Fourth District for allowing me the privilege to serve them.

Fifth District — ROBERT G. MACBRIDE, M.D.

Throughout the past year I have attended all of the meetings of the Washington County Medical Society. However, due to distances, an extremely busy schedule and weather, I have been unable to attend meetings of the Hancock County Medical Society. Through receiving its notices and from conversations with its members, I know that the Hancock Society has held frequent meetings with excellent programs. I feel this is an active, growing society whose members are endeavoring to settle their problems and growing pains wisely, diplomatically and at the county level.

The Washington County Society has held four regular meetings, one meeting in conjunction with the New Brunswick Medical Society. The annual meeting in November was attended by Eugene E. O'Donnell, M.D., President of the Maine Medical Association. Attendance at these meetings has been only fair because of the distances involved and because of the lack of professional coverage in this area. The society has one new member, George Nackley, M.D. of Machias. Efforts are being made by the society and its individual members to induce more physicians to enter the practice of medicine in this county. Studies are also being made of the medical needs of western Washington County with a view towards establishing a hospital in this area as a service to the people, the new military bases and as an inducement to persuade other doctors to settle in the county.

I feel that medicine, as well as all other phases of life in the Fifth District, is in the process of undergoing dramatic change and that the next few years not only should be but must be rewarding ones.

Sixth District — RALPH C. STUART, M.D.

This report on conditions existing in my District will cover a period of only eight months since I am a new councilor.

In October I attended a Fall session of the Aroostook County Medical Society at Caribou and enjoyed lectures and slides given by gynecologists and obstetricians from the Boston Lying-In Hospital. A large attendance was present from all over the county and except for some differences between two physicians of a rather personal nature, everything seemed harmonious. The discussions concerning the building of a new wing on some selected hospital by the state to care for the tubercular patients after the closing of the present sanatorium were rather interesting.

I attended one meeting of the Penobscot County Medical

Society last Fall wherein Dr. Clarence Little discussed the pros and cons of smoking and the general use of tobacco in all forms, but expressly cigarette smoking. He represented the Tobacco Industry so we had to measure carefully his conclusions. When I left the hall I felt like the two doctors pictured in a cartoon in the A.M.A. Journal who were leaving a similar lecture, and one doctor said that he would conclude from all he had heard that "mice should not smoke."

Controversy over the selection of doctors to cover night

calls caused considerable controversy and at times loud discussions, but otherwise all seemed to be quite on that front. Recently I attended the Spring Assembly and Dinner and left everybody in the best of spirits.

Piscataquis, my own County, has had three meetings which as usual were very informal, consisting of fish fries mixed with Insurance headaches, etc. However, all in all we clear up our differences with either loud shouting or the use of a rubber mallet.

Committee Reports — 1958-1959

(Continued from July issue)

Committee on Arthritis

The Committee on Arthritis met once in Portland at the Maine Medical Center. There were five members present.

1. The significant developments of the year were the continuation of the Outpatient Clinic programs at the Eastern Maine General Hospital and the Maine Medical Center.

2. The preliminary steps were taken for establishing chapters of the Pine Tree Arthritis and Rheumatism Foundation in Waterville, Augusta and Bangor. It is hoped that these new chapter branches will be formed during the coming year.

3. There was an increase of an allocating of funds from

the United Community Fund of Greater Portland to the Pine Tree Chapter. This will enable us to have a mobile unit to provide physiotherapy and other services to arthritic patients in their homes.

4. The establishment of two new rehabilitation units with excellent staffs at the Thayer Hospital and Hyde Home-Bath Memorial Hospital. These two important adjuncts to rehabilitation services in Maine will immeasurably assist in the extension of care for the arthritic patient in Maine.

PHILIP P. THOMPSON, JR., M.D., *Chairman*

Maternal and Child Welfare Committee

There were no meetings of the Maternal and Child Welfare Committee during the past fiscal year.

The work of the Accident Prevention Program in Rockland during 1958 was reviewed and several conclusions were drawn.

1. No such program can be undertaken by the medical group alone. It becomes quite easy as such a program progresses to obtain help from the civilian groups, particularly through the schools and press, but the greatest difficulty is to find a director for such a continuous program, for it is necessary that some one person co-ordinate all direct efforts.

The ideal person is not an M.D., but someone with an ability to write press releases and engaging headlines, for publicity is of utmost importance. An M.D. must act on the results and thus direct the publicity in the necessary channels and force the education of the public. The M.D. may also talk at schools and gatherings concerning the main hazards encountered in any one community.

2. Specific results in our own community in most instances paralleled the national situation.

a. Home seems to be the most dangerous place, and this applies to both adults and children. Our casualties at home were nearly twice as many as in other areas. Work areas and commercial sites were second, but organized areas for children as school and playgrounds were much less frequent sites of trouble than in the home. Only about one-third the number of injuries arose where such jurisdiction applied.

b. More accidents came from falls than from any other source for both young and old. Second to this, about 20% less frequent, is injury from sharp instruments; cutting tools, tin cans, splinters, machine tools, etc. Blows by blunted instruments or bumping solid flat surfaces, etc. were the third most frequent offenders.

c. The largest number of accidents occurred in the 9:00 a.m. to Noon period and the next most hazardous period was post-school and work, and from 3:00 p.m. to 6:00 p.m. time, about one-third less accidents occurred than in the morning hours.

3. While poisonings in childhood were not numerous, in our series on time it did show up markedly. We have no poison center in Maine and on quite a number of occasions calls were made to the center in Boston to solicit their aid. Were some central area available in Maine, I believe that northern Maine would benefit markedly, although here in Knox County and to the south it is not too difficult to call Boston, a center in the Bangor area would be of much greater help to the whole state. In fact any Maine Center at Augusta, Waterville or Portland would be of greater help to the northern counties or even to us along the coast. In this day of more and more household compounds such centers of knowledge are of paramount import.

FRANK W. KIBBE, M.D., *Chairman*



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Enterovirus Surveillance In 1958

MARGARET H. OAKES, Assistant to the Director
Division of Communicable Disease Control

Epidemiological investigations of poliomyelitis cases have long been the subject of study by the Division of Communicable Disease Control of the Maine Department of Health and Welfare, due to the fact that since 1930 all cases — both paralytic and "nonparalytic" — have received investigation. Virological studies began in 1954 in the Vaccine Test Areas, when numerous cases and contacts were the subject of special surveillance. Virus cultures revealed many isolations of Type I virus (and only Type I) in the Bangor Test Area; whereas the few isolations from cases and contacts in the Portland Test Area showed infection with Types I and III and probably II, and several isolations in one family group of a virus then known only as an "Orphan." We now would call this an enteric cytopathogenic human orphan (ECHO) virus.

Since 1955 the Division has been cooperating with the U. S. Public Health Service in their Polio Surveillance Program and laboratory studies have been done on several cases. However routine virological work was not possible because of the overloaded condition of the out-of-state Reference Laboratory which was being used.

It was, therefore, not until the summer of 1958 that attempt was made to study every case in the laboratory in order to determine how many cases were due to poliomyelitis virus and what types of polio virus were concerned, as well as to find out whether the other enteroviruses — Coxsackie and ECHO groups — were responsible.

Our enterovirus study program had actually gotten off to a start the very first week of January, 1958, when for the first time our Weekly Communicable Disease Report carried a family outbreak of three cases of ECHO 9 aseptic meningitis, and an article suggesting that physicians submit specimens for diagnosis from cases of aseptic meningitis syndrome.

In July, 1958, physicians were informed via the

Weekly Report of the recently publicized recommendations of the WHO Expert Committee on Poliomyelitis that only paralytic cases (with clearly demonstrable paralysis) should be designated as polio and that so-called "nonparalytic" cases should be designated as aseptic meningitis syndrome due to — poliomyelitis, Coxsackie, ECHO or whatever etiology was established by the laboratory.

The fact was also brought out at this time that some of the Coxsackie and ECHO viruses were known to be able to produce paralysis.

For these reasons, plans were announced for a special surveillance program for determination of the etiology of every case of aseptic meningitis syndrome and also of every paralytic case. It was further decided at this time that the diagnosis of "nonparalytic poliomyelitis" would not be accepted for statistical purposes unless the case was proved in the laboratory to be due to polio virus.

Since our most convenient, although not the nearest, Virus Reference Laboratory is the Virus Diagnostic Unit of the Communicable Disease Center, U. S. Public Health Service, in Georgia, and since specimens obtained for viral isolation must be promptly frozen, and kept so, the problems attendant on proper shipping of feces and other specimens for viral culture were found to be numerous. However, by the use of hospital laboratory freezers, dry ice and other expedients, the difficulties were surmounted.

The first case investigated under our organized enterovirus surveillance program had onset on July 18. From that point on, all reported cases were investigated routinely and every attempt was made to obtain specimens for viral isolation and serology. A few cases were at first incorrectly suspected of being polio; some were correctly believed from the first to be ECHO 9 infections; three were recognized at once as typical severely paralyzed cases of polio; concerning others there was

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uncertainty. In all, 22 persons were investigated, from 19 of whom specimens were sent to Georgia. One of the three whose specimens were not sent was a paralytic

poliomyelitis case sent to the Children's Medical Center in Boston and diagnosed and treated there. This was found to be a Type II case.

The following list shows the 22 cases:

<i>No.</i>	<i>Age</i>	<i>Initial diagnosis</i>	<i>Lab. exam.</i>	<i>Final diagnosis</i>
			*	
1	M-25	? Asep. men. syn.	St., sera	? Strep. pharyngitis
2	M-40	? Asep. men. syn.	Not exam.	Brain abscess — Staph.
3	F-18	? Asep. men. syn.	Not exam.	Staph. septicemia
4	F-20	? Polio ? Coxsackie	St., sera	ECHO 9 meningitis
5	M-14	Asep. men. syn.	St., sera	ECHO 9 meningitis
6	F-8	Asep. men. syn.	St., sera	ECHO 9 meningitis
7	M-31	Asep. men. syn.	St., sera	ECHO 9 meningitis
8	M-28	? (Sudden death)	Brain	Acute cong. of lungs
9	F-17	? Asep. men. syn.	St., sera	"Severe grippe"
10	M-50	Mild G. I. upset	St., sera	Mild G. I. upset
11	F-44	Mild G. I. upset	St., sera	Mild G. I. upset
12	M-6	Asep. men. syn.	St., sera	ECHO 9 meningitis
13	F-30	Asep. men. syn.	St., sera	ECHO 9 meningitis
14	M-23	? Par. Polio	St., th. wash.,	Poss. mult. sclerosis
		? Asep. men.	sera	
15	M-22	Asep. men. syn.	St., sp. fl., sera	Asep. men., ? etiology
16	F-22	Asep. men. syn.	St., sera	ECHO 9 meningitis
17	M-27	Asep. men. syn.	St. lost, sera	Asep. men., ? etiology
18	M-5	? Polio	St., sera	No disease
19	F-7mo	? Asep. men. syn.	St., sera	Asep. men., ? etiology
20	F-25	Paral. Polio	St., sera	Polio, Type I
21	F-4	Paral. Polio	St., sera	Polio, Type III
22	M-2	Paral. Polio	In Mass.	Polio, Type II
* St. — Stool specimen				

Note. Nos. 2 and 8 were fatal cases. Nos. 5, 6 and 7 were part of a small neighborhood outbreak of aseptic meningitis syndrome. Nos. 10 and 11 were parents of No. 12. They had no meningeal symptoms. No. 18 showed temporary lameness, probably a result of injury.

The enterovirus surveillance program is continuing this summer, and physicians and hospitals are urged to report at once when cases are seen which are frankly paralytic or which show evidence of aseptic meningitis syndrome, in order that the cases may be investigated and that virological studies may be expedited. The U. S. Public Health Service is continuing its study of the effect of vaccine on incidence of poliomyelitis,

especially paralytic polio, and is also interested in determining the role of the other enteroviruses. It is hoped that the surveillance program which was so successfully carried on in Maine last year with 22 cases will meet with equal success in 1959, and that data obtained here, even though they may not be numerous, will continue to be of value in the nation wide study of enteroviruses.

County Society Notes

FRANKLIN AND OXFORD

June 17, 1959

On June 17, 1959 a combined meeting of the Franklin and Oxford County Medical Societies, to which the wives were invited, was held at Saddleback Lake Lodge. A total of 45 people attended.

Eugene E. O'Donnell, M.D., of Portland, President of the Maine Medical Association, spoke relative to the problem of the care of the aged.

James A. MacDougall, M.D., of Rumford, Councilor of the Second District including Franklin and Oxford counties, also spoke briefly.

PAUL E. FLOYD, M.D.
Secretary

Deceased

AROOSTOOK

Albert H. Damon, M.D., Limestone, July 27, 1959

CUMBERLAND

F. Donald Dorsey, M.D., 52 Deering Street, Portland, July 4, 1959

James G. S. Jamieson, M.D., Winchester, England, July 23, 1959

FRANKLIN

Cecil F. Thompson, M.D., Dodge Road, Phillips, July 8, 1959

KNOX

Robert L. Allen, M.D., 22 White Street, Rockland, July 31, 1959

LINCOLN-SAGADAHOC

Arthur H. Sampson, M.D., Main Street, Damariscotta, June 25, 1959

Announcements

Symposium on Evaluation of Early Diagnosis of Cancer

The "Symposium on Evaluation of Early Diagnosis of Cancer" is to be presented at the Annual Scientific Session of the American Cancer Society to be held October 26 and 27, 1959 at the Baltimore Hotel, New York City. Subjects to be discussed include: "What is Early Cancer," "The Economics of Cancer Detection," "The Value of Periodic Examinations in Detection of: (each different type of cancer)," "Does Periodic Examination of Well Persons Increase Longevity?," "Precancerous Lesions and How To Treat Them" and "The Treatment of Early Cancer." This program is fully approved and recommended by the American Academy of General Practice for 12 hours of Category II Credit for its members. For additional information write to the American Cancer Society, Inc., 521 West 57th Street, New York 19, N. Y.

COUNTY SOCIETIES

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Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

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Secretary, C. W. Kinghorn, M.D., Kittery

New England Society of Anesthesiologists

The Second Regional Conference of the New England Society of Anesthesiologists is going to be held Friday and Saturday, September 18th and 19th at the Equinox House, Manchester-in-the-Mountains, Vermont. The theme of this conference is "Agents and Techniques." Under "Agents," ether, cyclopropane, curare and analgesics will be covered. "Techniques" will include "Epidural Analgesia," "Transtacheal Anesthesia," "To-And-Fro Carbon Dioxide Absorption" and "Artificial Ventilation." There is no registration fee for members and a five dollar fee for non-members. For further information, write the New England Society of Anesthesiologists, P. O. Box 81, Kenmore Station, Boston 15, Massachusetts.

National League for Nursing Fellowships

The National League for Nursing is encouraging nurses to avail themselves of the unique opportunity offered by the NLN Fellowship Program. This program provides generous fellowships for nurses having superior ability and leadership qualities who are engaged in programs of advanced study. For further information contact the National League for Nursing, Inc., 10 Columbus Circle, New York 19, N. Y.

Association of Military Surgeons

Registration begins on November 8, 1959 for the 66th Annual Convention of the Association of Military Surgeons which will run until November 11. The theme of the convention is "Practice Of Military Medicine — Broadening Concepts." A closed circuit color television program will be one of the highlights of the meeting. It will include presentations

from the most significant developments in military medicine. There will also be special section meetings with panel discussions for the dentists, veterinarians, nurses and medical specialists. For further information, write the Association of Military Surgeons, 1726 Eye Street, N. W., Washington 6, D. C.

International College of Surgeons

The Mid-Atlantic Meeting of the International College of Surgeons will be held at the Homestead Hotel, Hot Springs, Virginia on November 16, 17 and 18. The profession is cordially invited to attend.

American Goiter Association

The Fourth International Goiter Conference will be held at the Royal College of Surgeons, London, England, July 5 through 9, 1960. All American abstracts must be received by J. E. Rall, M.D., National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda 14, Maryland, by December 1, 1959. They should not exceed 400 words and should be submitted in quintuplicate.

The American Goiter Association again offers the Van Meter Prize Award of \$300.00 to the essayist submitting the best manuscript of an original and unpublished work concerning "Goiter — especially its basic cause." The studies so submitted may relate to any aspect of the thyroid gland in all of its functions in health and disease. The Award will be made at the Fourth International Goiter Conference in 1960 and the recipient of the Award will receive consideration for an award of a travel honorarium. The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English.

POSTGRADUATE DIVISION TUFTS UNIVERSITY SCHOOL OF MEDICINE

Announces A Postgraduate Course REVIEW OF RECENT ADVANCES IN INTERNAL MEDICINE

October 5-10, 1959

At The
New England Center Hospital

THE FOLLOWING SPECIAL SUBJECTS WILL BE COVERED:

CARDIOLOGY: DR. SAMUEL PROGER, *Chairman*

KIDNEY & ELECTROLYTES: DR. W. B. SCHWARTZ, *Chairman*

ENDOCRINOLOGY: DR. E. B. ASTWOOD, *Chairman*

INFECTIOUS DISEASE: DR. LOUIS WEINSTEIN, *Chairman*

HEMATOLOGY: DR. WILLIAM DAMESHEK, *Chairman*

ALLERGY-PULMONARY DISEASE: DR. R. P. MCCOMBS, *Chairman*

FOR FURTHER INFORMATION WRITE:

Dept. F, Postgraduate Division, 171 Harrison Ave., Boston 11, Mass.

Duplicate typewritten copies, double spaced, should be sent to the Secretary, John C. McClintock, M.D., 149½ Washington Avenue, Albany 10, New York, not later than January 1, 1960. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

Occupational Medicine

The New York University Postgraduate Medical School Institute of Industrial Medicine offers a full-time, two-month course in Occupational Medicine. Didactic instruction will be supplemented with field trips to industrial plants, to governmental agencies concerned with occupational health and to union health centers. Opportunity will be given to attend medical, surgical and clinical-pathologic conferences held in the New York University-Bellevue Medical Center. The course, from September 14 through November 6, 1959, will cover preventive medicine, administrative medicine, occupational diseases and industrial hygiene. For further information write to: Office of the Associate Dean, New York University Postgraduate Medical School, 550 First Avenue, New York 16, N. Y.

Kenny Foundation Scholarship Program

The Sister Elizabeth Kenny Foundation announces continuation of its program of postdoctoral scholarships to promote work in the field of neuromuscular diseases. These scholarships are designed for scientists at or near the end of their fellowship training in either basic or clinical fields concerned with the broad problem of the neuromuscular diseases. The Kenny Foundation Scholars will be appointed annually. Each

grant will provide a stipend for a five-year period at the rate of \$5,000 to \$7,000 a year depending upon the scholar's qualifications. Candidates from medical schools in the United States and Canada are eligible. Inquiries regarding details of the program should be addressed to: E. J. Huenekens, M.D., Medical Director, Sister Elizabeth Kenny Foundation, Inc., 2400 Foshay Tower, Minneapolis 2, Minnesota.

American College of Surgeons

The 45th annual Clinical Congress of the American College of Surgeons will be held in Atlantic City, New Jersey, September 28 through October 2, 1959. Stuart Z. Hawkes, M.D., Newark, New Jersey, is Chairman of the Local Advisory Committee on Arrangements. Newell W. Philpott, M.D., Montreal, current President of the American College of Surgeons, will preside at the opening evening session, at which Dr. Dean Rusk, President, The Rockefeller Foundation, will speak. Other major addresses will be made by Owen H. Wangenstein, M.D., Minneapolis, incoming president of the College, R. Arnold Griswold, M.D., Louisville, speaking on abdominal injuries and David Paton Cuthbertson, M.D., Bucksburn, Scotland, speaking in the field of parenteral fluid therapy. Headquarters for the Congress will be Convention Hall, with some of the sessions scheduled at nearby hotels. For further information write to the American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

The Academy of Psychosomatic Medicine

The sixth annual meeting of the Academy of Psychosomatic Medicine will be held October 15 through 17, 1959 at the Sheraton-Cleveland Hotel in Cleveland. Practical everyday

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The Assembly is sponsored by the Massachusetts Medical Society in cooperation with the State Medical Societies and State Chapters of the American Academy of General Practice of Maine, New Hampshire, Rhode Island and Massachusetts.

office management of psychosomatic problems and emotional disturbances will be dealt with in formal papers, symposia, panel discussions and small study groups. The meeting will be open to all scientific disciplines as well as to psychologists, social workers and nurses. Information may be obtained from Bertram B. Moss, M.D., Suite 1035, 55 East Washington Street, Chicago 2, Illinois.

American Institute of Ultrasonics in Medicine

The American Institute of Ultrasonics in Medicine will hold their Annual Meeting on September 2, 1959 at the Leamington Hotel, Minneapolis, Minnesota. The guest speaker at the Luncheon Meeting will be Russell Meyers, M.D., Professor of Surgery and Chairman, Division of Neurosurgery, State University of Iowa Hospitals and College of Medicine, who will discuss "The Potentials of Ultrasonics in General Surgery and Surgical Specialties." For any further information contact John H. Aldes, M.D., Secretary, 4833 Fountain Avenue, Los Angeles 29, California.

Letter To The Editor

Medical and Chirurgical Faculty
of the State of Maryland
1211 Cathedral Street
Baltimore 1, Maryland

Daniel F. Hanley, M.D., Editor
Journal of the Maine Medical Association
P.O. Box 240
Brunswick, Maine

Dear Dr. Hanley:

The Medical and Chirurgical Faculty of the State of Maryland (Maryland State Medical Association) has, for many

years, expressed concern over the inroads the Veterans Administration Hospitals are making into the realm of the private practice of medicine. In order to combat the fantastic growth of treatment of non-service connected ailments of veterans, the Faculty has passed many resolutions condemning this practice and urging that something concrete be done to curtail or stop this insidious growth.

The Faculty's House of Delegates at its 1959 Annual Meeting passed a resolution that all component medical societies of the American Medical Association be contacted and urged to support the Faculty's stand in this respect.

As a result of a letter sent to every A.M.A. component medical society, eleven answers have been received, all in the affirmative.

It is anticipated that other societies will also reply in the affirmative and that full support to this projected concerted action will be forthcoming from them as well.

I sincerely hope that you will see fit to publish this letter and alert your readers to the steps that are being contemplated along these lines, not the least of which is the hope that an appropriate resolution will be introduced in the A.M.A.'s House of Delegates at its clinical session in Dallas in December.

Sincerely,
AMOS R. KOONTZ, M.D., Chairman
Committee on Veterans' Medical Care

"Even now it can be said that we know how to wipe out coronary disease just as effectively as we have wiped out cholera, yellow fever, plague or typhus and more completely that we have wiped out pneumonia, tuberculosis, or syphilis." Dr. Wm. Dock, Heart Sounds, Cardiac Pulsations and Coronary Disease, 1956, page 85. Selected by Andrew M. Babey, M.D., Las Cruces, New Mexico.

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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, September 1959

Number 9

Cavernous Sinus Thrombosis

LORING W. PRATT, M.D.*

In the present-day practice of medicine, certain serious diseases, which used to be reasonably common, are seen but infrequently. Cavernous sinus thrombosis is one of these. It has become almost legendary that squeezing a pimple on the face, in the region of the nose or upper lip, is likely to be fatal; and the case at hand is one which points graphically to the fact that this may actually happen.

This is a case of bilateral cavernous thrombosis resulting from squeezing a furuncle on the left upper eyelid, with near death but fortunately good recovery of a child. The mode of spread of this infection was related to anatomical venous vascular channels. A furuncle on the left upper eyelid was squeezed, pus was introduced into the venous blood channels of the upper lid, passed along the ophthalmic vein of the left eye and into the cavernous sinus. There a thrombophlebitis was set up which extended through the intercavernous sinus or sinuses to the contralateral cavernous sinus, interfering with the venous drainage of the right eye. The right eye then became chemotic, edematous and proptosed. It is because of the intimate connection between the ophthalmic vein and the cavernous sinus that dissemination of pus from lesions in this area is particularly dangerous. In most regions, there are certain very definite barriers to the flow of purulent material through the veins; and in most anatomical locations, there is no direct drainage into one of the big intracranial sinuses. This peculiarity of the region of the face and the ophthalmic vein makes a dangerous arrangement.

The anatomy of this area must be understood in order to appreciate the potential for the spread of infection. The veins of the face and mouth (the infra-

orbital, frontal, palpebral, anterior ethmoid, posterior ethmoid, palatine and pterygoid plexus) all drain either into the ophthalmic veins or directly into the cavernous sinus. See Figure 1. Because of this drainage, these valveless veins may freely introduce purulent or septic materials and spread infection into the cavernous sinus without delay.

The cavernous sinuses themselves are paired, thin-walled, extradural, venous channels which are crossed by numerous trabeculae. These slow the flow of blood and contribute to the development of a clot secondary to a thrombophlebitis. It is of interest to note that the paired cavernous sinuses are connected anteriorly by the anterior intercavernous sinus and posteriorly by the posterior intercavernous sinus. See Figure 2. From each cavernous sinus there goes laterally and backward a direct connection with the superior petrosal sinus which enters the lateral sinus. The basilar plexus is also a tributary of the cavernous sinus. Forward is the sphenoparietal sinus. It is because of the close association of these vascular channels that extension of septic thrombi into other remote areas of the brain may readily take place. The carotid artery and cranial nerves III, IV, V and VI often pass through the sinus. The symptoms and signs of disease in this sinus depend on the foregoing anatomical details.

Diagnosis: There are two types of cavernous sinus thrombosis which were described in 1926 by Eagleton: the first type is the acute infection of the cavernous sinus which produces the classical signs noted in the present case; the second type is a slowly obliterating thrombophlebitis in which obstruction of the cavernous sinus slowly develops over a long period of time, and in which the classical signs of acute cavernous sinus thrombosis do not occur, or appear at a very late stage in the disease. The diagnosis of acute cavernous sinus throm-

*Department of Otolaryngology, Sisters Hospital, Waterville.

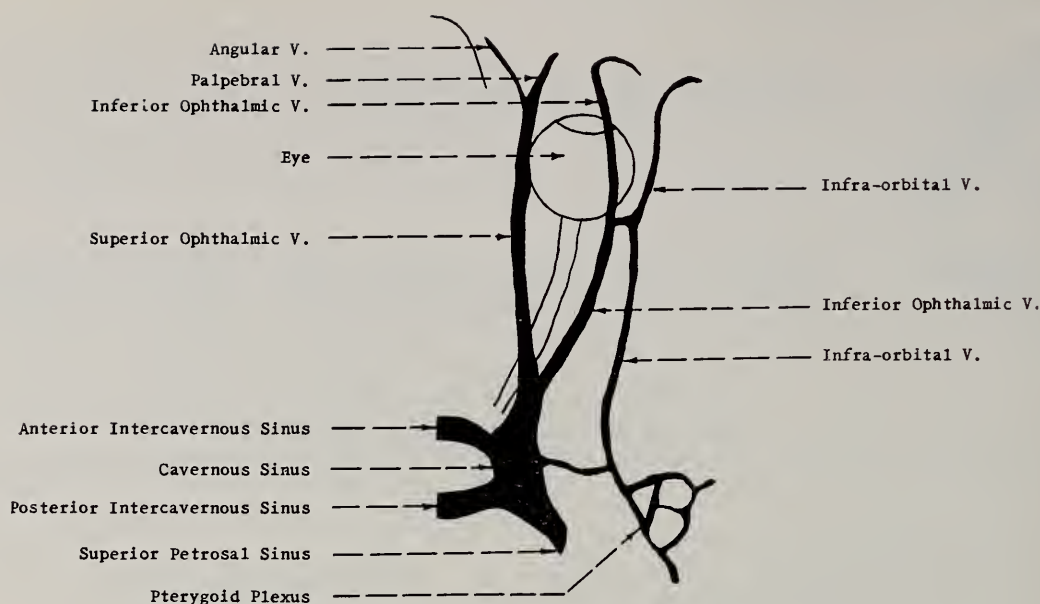


FIG. 1. Shows a view of the cavernous sinus and shows how the superior ophthalmic vein and the inferior ophthalmic vein drain directly into it. These veins collect blood from the frontal region, from the angular vein, and from the infra-orbital vein. They also anastomose with the pterygoid plexus. It is because of the rich anastomosis and close association of these valveless veins that purulent material may be thrown directly into the cavernous sinus from facial infections.

bosis is dependent upon (1) mechanical obstruction to venous return which, as a secondary manifestation, produces dilatation of the veins, of the eyelids and face, chemosis of the conjunctiva, edema of the lids, exophthalmos and dilatation of the retinal veins; (2) ophthalmoplegia from pressure on the nerves in the sinus and orbit; (3) the generalized evidence of sepsis which results from bloodstream infection and is characterized by fever, chills, and metastatic distribution of infection; (4) meningitis or meningitic-type symptomatology.

The symptomatology in cases of cavernous sinus thrombosis depends somewhat upon the path of entrance of infection into the sinus, which in turn determines which part of the sinus is first involved in the disease. The most common source is the ophthalmic vein which introduces infected material into the anterior part of the sinus and produces the classical symptomatology of chemosis and exophthalmus. Extension across the anterior communicating sinus involves the other cavernous sinus with chemosis and exophthalmus of the other eye. In a recent paper, Taylor has said that all cases of bilateral involvement die in 6-48 hours. The present case was of this type with survival.

Symptoms arise from involvement of nerves passing through the cavernous sinus, as a result of inflammatory edema or direct pressure. These may be paralysis or paresis of the 3rd, 4th and 6th nerves, parathesia or anesthesia of the 1st branch of the 5th, and diplopia which is either transient or permanent.

Headache is a prominent symptom, and Eagleton felt that headache is not usually present when infection is confined to the sinus itself. Its appearance signifies meningeal irritation from perisinus infiltration or supuration of bone in the vicinity of the meninges.

Diagnostically, blood cultures are very important, and a positive one aids greatly in the diagnosis. The differential diagnosis usually lies between sinus thrombosis, meningitis and brain abscess.

Prognosis: The prognosis of cavernous sinus thrombosis, prior to the age of antibiotics, was very gloomy. The group of cases reported as recovered has been very small. With surgical therapy, consisting of ligation of the internal carotid artery, to provide rest for the inflamed areas and to reduce the blood flow through the sinuses, the mortality of cavernous thrombosis was extremely high. Eagleton reported a series of 25 cases, with 21 deaths and four recoveries. In one case, the diagnosis was questionable, clinical evidence not being sufficient to warrant a positive diagnosis that the cavernous sinus itself was involved. This gives a recovery rate of 12%.

Today, the picture has greatly improved. The use of massive doses of antibiotics in combinations known to be effective against the offending organisms, anticoagulants, and supportive measures, has greatly improved the outlook. Taylor reported 98 cases with 60 survivors in 1957. All were treated with combinations of antibiotics, and many with anticoagulants.

CASE HISTORY

This six-year-old white female was admitted to the Sisters Hospital on the 2nd day of March, 1959, following her examination in the office. The present illness was of four days' duration. She had had a furuncle on her left upper eyelid which was treated by squeezing. The morning following this trauma, the upper eyelid was swollen, red, edematous and tender. She was taken to her family physician, who put her on penicillin orally

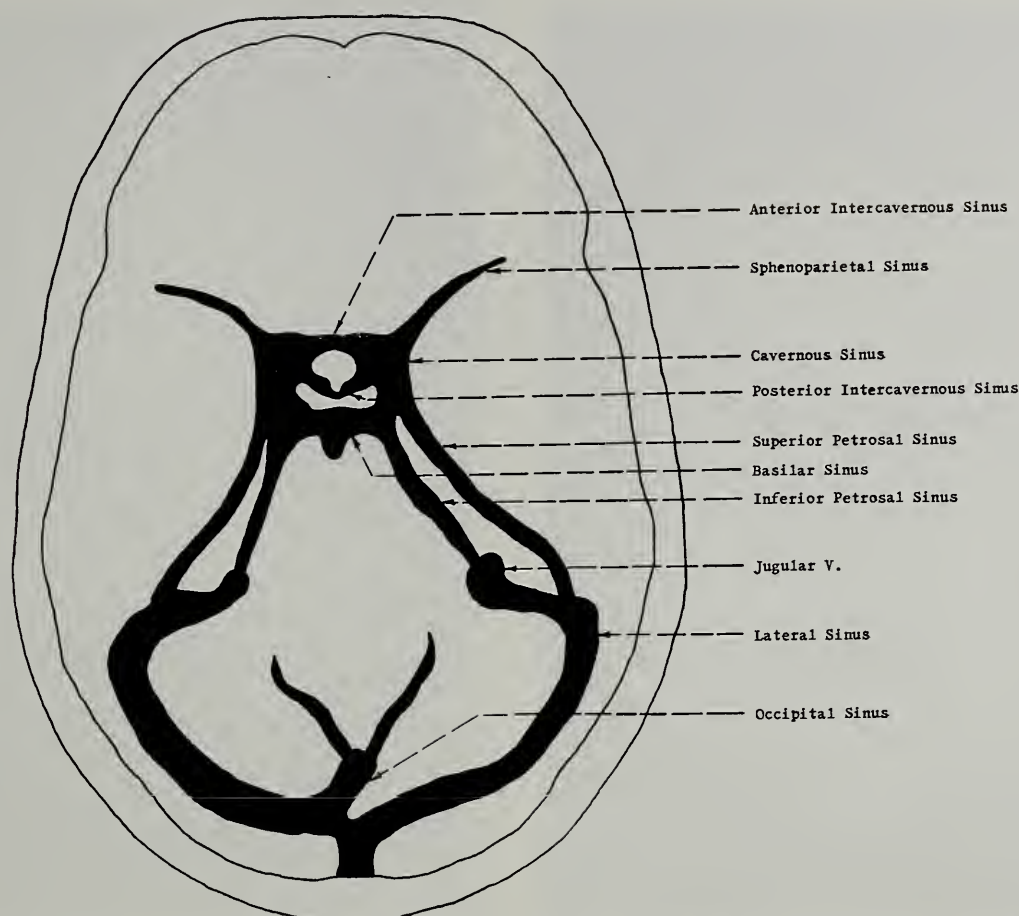


FIG. II. The cavernous sinuses are located on either side of the sella turcica and are connected by the anterior intercavernous sinus and the posterior intercavernous sinus. This connection of the sinuses actually makes them a so-called ring sinus. The superior petrosal sinus goes laterally and backward from each side from the posterior part of the cavernous sinus and thence into the lateral sinus. The inferior petrosal sinus goes laterally and backward from each side of the posterior part of the cavernous sinus and thence into the lateral sinus. The sphenoparietal sinus goes forward. By virtue of the rich anastomosis of these sinuses with each other, it is possible for the propagation of phlebitis or infection to take place in any direction and to involve practically any of the other cranial sinuses by extension of a process in any one of them, and for septic emboli to be freely disseminated into the jugular vein. (Adapted from Meschan)

and gave her antibiotic medication to use in her eye as drops. Three days prior to admission, she had two doses of oral penicillin. Two days before admission, her eye was more swollen; and one day before admission, because it was a Sunday and her parents were reluctant to disturb their physician, they watched her eye worsen without further definitive therapy, except continuation of oral penicillin.

On the day of admission, she was seen by her family physician, who referred her to an ophthalmologist. He felt that this was an orbital cellulitis and potential cavernous sinus thrombosis, and referred her for Ear, Nose and Throat consultation. It was interesting to note her progress from the time when she was seen by the ophthalmologist to the time when she was examined just prior to admission to the hospital. During these two hours, a great change took place in the appearance of her eye. See Plate 1. When she was seen by her ophthalmologist, she had a thick, red, edematous eyelid

with ptosis, partial limitation of motion of the left globe and apparent impairment of vision. She was able to distinguish fingers at two feet, but very little more. She had no useful vision, and her extra-ocular movements were impaired. Her pupils, however, still reacted actively to light and accommodation. Her right eye was examined and found to be entirely normal. There was no swelling or edema of the eyelid or chemosis of the conjunctiva. There was no impairment of extra-ocular movement, and the pupil reacted actively to light and accommodation. She had 20-30 vision in her right eye which appeared normal. There was no evidence of chemosis or edema of the lids.

When she was examined two hours later, however, she had beginning chemosis of her conjunctiva on the right and edema of her right upper eyelid. There was, by this time, some impairment of motion of her globe; and there was no doubt about her diagnosis. At this time, she was able to stand, walk and follow instructions



Photo taken in office at 3:00 p.m., March 2, 1959, showing swelling and chemosis, redness of left upper eyelid with beginning changes on right.



Nine hours later (12:15 a.m., March 3, 1959), showing progress of disease with bleeding of left conjunctival sac and worsening of right upper lid.

reasonably well; but she was definitely dehydrated and very weak.

The child was admitted at once to the Sisters Hospital. Her past history was not contributory to her present illness; and her admission diagnosis was "orbital cellulitis, probable cavernous sinus phlebitis with thrombosis." She was seen in consultation by an internist and by a pediatrician who felt that she had bilateral cavernous sinus thrombosis, and by an ophthalmologist who also felt that she had bilateral cavernous sinus thrombosis. Her fever, on admission to the hospital, was 105.0° , and rose rapidly to 106.0° . See Figure 3. Cultures of eye and blood yielded *Staphylococcus albus*, Coagulase positive. A cut down was done, and she was treated vigorously with antibiotics; and her initial orders were for Bicillin®, 600,000 units stat., and q 6 h was promptly increased to 1,000,000 units of Penicillin every two hours. Achromycin®, 500 mg. stat., and Chloramphenicol®, 500 mg. every six hours and Erythromycin®, 500 mg. every six hours was then added. The Achromycin was discontinued. She was also started on heparin; and as quickly as possible, she was shifted to maintained dosage of Coumadin®.

A lumbar puncture was considered and decided against; it was felt by the neurosurgical consultant that this would offer information of only academic value, but

not of therapeutic help to the child. For this reason, it was not done.

Hospital course: This child, on the day of admission, had a temperature of 106.0° and was alert and cooperative. On this occasion, her fundi showed clear-cut discs; they were rather pale, but the vessels were normal, and she retained fluids well. Her neck was stiff, her lungs were clear, and the remainder of her examination was normal. It was felt that she had improved somewhat clinically from the time of admission. She was a little less irritable, alert and cooperative. There was no other appreciable change in her general condition. Later in the day, during the evening, her temperature dropped to 105.0° ; and considerable blood began to ooze from her right eye. There was increase in the orbital edema, and this involved both eyes. The pupil still reacted, and she said that she could see. The globe rolled around freely. She became irritable and screamed occasionally. On this day, Chloramphenicol and Vancomycin® were added to the antibiotic armamentarium. Her eye appeared to be no worse.

On the second hospital day, her temperature was 103.4° ; she was alert, cooperative, and she seemed to be improving. The fundus also appeared to be improving, and the disc of the optic nerve now appeared to be of relatively normal color. She had a positive Bab-



Forty-eight hours after admission (8:30 a.m., March 4, 1959) to hospital showing involvement of both eyes with bleeding of both conjunctival sacs.

inski on the left and seemed to be making favorable progress.

On the third hospital day, she was improved. At no time during the course of her illness was she unresponsive or out of contact with her surroundings; her sensorium remained clear at all times. There had been no vomiting, and her facial and orbital edema was resolving. The pupils reacted actively to light and accommodation; and her vision, indicated by counting fingers, was excellent.

On the fourth hospital day, her temperature was 103.0°, pulse was 120 and respiration was 20. She was definitely improved, took fluids well, and the orbital edema appeared less.

On the fifth hospital day, there was no change. The edema and discoloration around her eye were less; she was coherent and apparently progressing nicely.

On the sixth day, her temperature was 100.8°, pulse 100, respiration 20.

This general steady improvement continued to the time of her discharge from the hospital, on the nineteenth hospital day. She made a perfectly uneventful recovery from the entire illness. She has, since then, been seen by her ophthalmologist, who found her vision 20-30, fields and fundi normal, no evidence of residual extra-ocular muscle impairment, and a 2 mm. ptosis of



Seventh hospital day (March 8, 1959), with left eye much improved and residual changes in right eye.

the left eyelid one month after the onset of this infection. Her mother has noted no changes in her psyche or mentation as a result of this illness.

SUMMARY

In this case of cavernous sinus thrombosis, the rationale of therapy was two-fold: the first was large overwhelming doses of antibiotics in an effort to eradicate all of the bacterial part of the disease, and the second was the use of anticoagulants in prevention of further thrombosis of the venous sinuses. The dangers of such thrombosis are two-fold: first, that extensive thrombosis of the venous sinuses may seriously interfere with the venous drainage of the brain; and second, and even more important, that development of septic emboli, which may be disseminated throughout the bloodstream of the individual, may occur and give rise to widespread miliary abscesses. This produces an unusually severe sepsis which is undoubtedly one of the major causes of fatality in this disease.

Treatment in this case was a combination of therapy. Heparin was used to immediately anticoagulate the patient, and she was then shifted to Coumadin to maintain anticoagulation. Antibiotic therapy was accomplished by the use of Penicillin, 1,000,000 units every two hours, Chloramphenicol 500 mg. every six hours,



Tenth hospital day (March 11, 1959), with only minimal residual lid changes and small amount of ptosis.



Twenty-four days after the day of admission (March 25, 1959) to hospital, with apparently complete recovery except for 2 mm. ptosis of right upper lid.

and Erythromycin 500 mg. every six hours. Achromycin was given, 250 mg. every six hours, at the onset of the disease but was terminated because of the staphylococcal origin of the disease. Because of the severity of the infection and the grave prognosis for the child, Vancomycin 500 mg., twice a day, intravenously was used. Buccal Varidase® was used as a means of controlling the edema of the eyelids, and in an effort to facilitate the entry of antibiotics into the septic areas.

The care of a complicated case, such as the above, necessitates the cooperative care of numerous physicians. No one individual is responsible for the recovery of the child described in this report, but her improvement and survival were the result of the efforts of all — physicians, nurses, and others who had any connection with her care.

CONCLUSION

This is to report a case of bilateral cavernous sinus thrombosis with recovery, treated by (1) antibiotics and (2) anticoagulants.

Attention is again called to the danger of traumatic management of an infection in the danger region of the facial triangle, due to the peculiarities of the drainage of the ophthalmic vein.

LABORATORY DATA

URINALYSES

3 March 1959

Color — yellow, cloudy; Ph 6.0; Albumin 50 mg%; Sugar 4+; Microscopic: WBC 5-7/HPF, Casts 0-1, per HPF; Finely granular; Much amorphous debris, occasional squamous cells, uric acid crystals, rare bacteria.

20 March 1959

Color — yellow, cloudy; Ph 6.0; Sp. Gr., 1.021; Albumin 0; Sugar 0; Microscopic: WBC 0-1/HPF; Calcium oxalate crystals, slight amorphous debris.

BLOOD STUDIES

2 March 1959

Hgb 14.0 gms; RBC 4,700,000; WBC 17,500; Differential, Polymorphonuclear Leucocytes 90, Bands 5, Lymphocytes 5.

4 March 1959

WBC 15,600; Differential, Polymorphonuclear Leucocytes 80, Bands 5, Lymphocytes 15; Hematocrit 37; Clotting Time: Lee-White 11 min.

16 March 1959

Hgb 9.5 gms; RBC 3,000,000; WBC 8,300 —

GRAPHIC CHART

Sheet No. _____

GRAPHIC CHART

Sheet No. _____

Service of Dr. _____

Service of Dr. _____

Service of Dr. _____

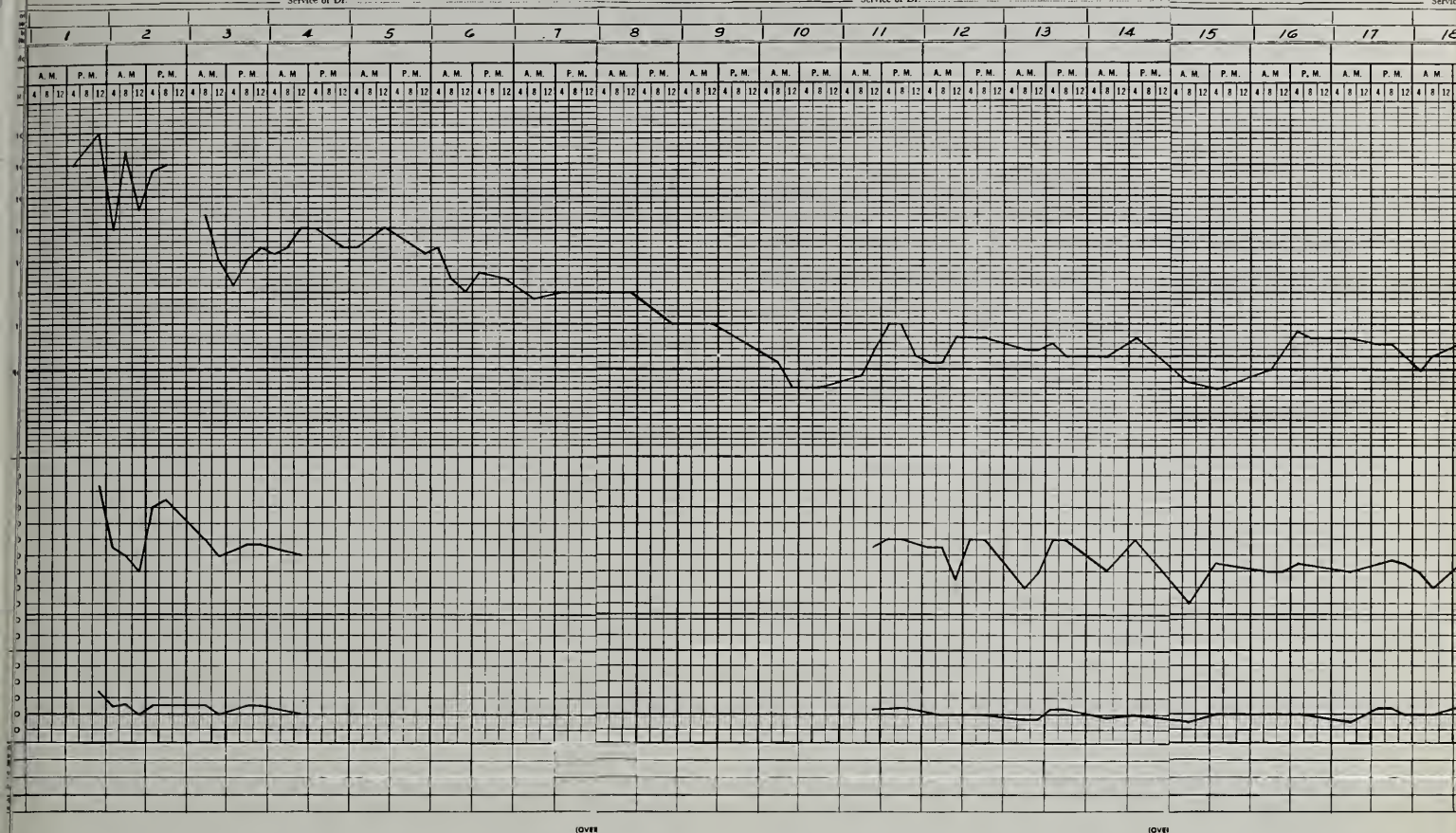


FIG. III. Temperature chart, as taken from hospital record.

Differential, Polymorphonuclear Leucocytes 50, Bands 1, Lymphocytes 49; Monocytes 0, Eosinophils 0, Basophils 0; Smear — Slight Anisocytosis.

PROTHROMBIN TIME

3 March 1959	21	seconds; control 15	seconds.
4 March 1959	19	seconds; control 15.5	seconds.
5 March 1959	32	seconds; control 15.5	seconds.
6 March 1959	41	seconds; control 15.5	seconds.
7 March 1959	22	seconds; control 15.5	seconds.
8 March 1959	27.5	seconds; control 15.5	seconds.
9 March 1959	30	seconds; control 15.5	seconds.
10 March 1959	35	seconds; control 15.5	seconds.
11 March 1959	22	seconds; control 15.5	seconds.
12 March 1959	21	seconds; control 15.5	seconds.
13 March 1959	22	seconds; control 15.5	seconds.
14 March 1959	26	seconds; control 15.5	seconds.
15 March 1959	29	seconds; control 15.5	seconds.
16 March 1959	26	seconds; control 15.5	seconds.
17 March 1959	30	seconds; control 15.5	seconds.
18 March 1959	30	seconds; control 15.5	seconds.
19 March 1959	25	seconds; control 15	seconds.
20 March 1959	21	seconds; control 15	seconds.

BLOOD CHEMISTRY

4 March 1959

Blood Sugar — 120 mg%

BACTERIOLOGY

3 March 1959

Eye culture: Report: Staphylococcus albus — N. Hemolytic; Coagulase Test + Positive; Sensitivity Studies: Novabiocin, Kanamycin, Chloromycetin, Furadantin.

7 March 1959

Blood culture: Report: Staphylococcus albus.

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Antibiotics And Bizarre Mastoiditis

JAMES E. POULIN, M.D.*

Much has been written about the use and abuse of antibiotics in all phases of medicine. This paper, however, will emphasize the relationship between the use of antibiotics and unusual mastoiditis. Some authorities have stated that the simple mastoidectomy should become a lost art and all cases of otitis media will respond to antibiotic therapy. I feel that this is allowing the pendulum to swing too far, that some moderation is to be expected. The use of antibiotic drugs during the past ten years in upper respiratory infections has decreased the incident of middle ear complications to a remarkable degree. The history of antibiotics, in this field, is filled with fame, because of the miraculous results which have been attained through their use. All of us can look back with amazement at the unbelievable results which we have obtained in the use of this new form of medication. During the past few years, the complete reliance on antibiotics has been so widespread that their curative powers have been completely taken for granted. That complications are still prevalent and even increasing is the fact I wish to stress in this paper.

Too many practitioners depend upon the use of chemotherapeutic and antibiotic drugs alone and administer them without arriving at a correct diagnosis. Part of this complacency is not entirely the fault of the physician, for the public often demands the use of these drugs even though it has no understanding of their function. Lay publications are constantly describing the miracles of the wonder drugs without any regard for the complications which may be associated with them. In no disease has this practice been so widespread as it has in acute otitis media. Many physicians, upon learning the patient's complaint, merely give one injection of penicillin and discharge the patient. Others administer a specific antibiotic of their choice as an empirical routine with total disregard for the type and phase of the infection. Administration of these drugs to all patients with acute otitis media is unwarranted and frequently distorts the clinical signs and symptoms which are needed for diagnostic purposes. All of us admit that antibiotics are one of our most valuable therapeutic agents when used as adjuncts in the general therapy of acute otitis media. When they are used correctly, they have made it possible to avoid most of the complications of the disease. The empirical and indiscriminate use of these drugs have unfortunately produced severe complications in a small percentage of cases. This, however, does not distract from the miraculous effect obtained from the

rational and adequate administration of these modern agents. They must, however, not be employed to the exclusion of indicated surgical procedures.

The treatment of an acute middle ear has for its objective eradication of the infection within and the restoration and preservation of hearing as well. This can best be accomplished if the physician recalls his knowledge of anatomy and physiology of the middle ear and its associated Eustachian tube. It is essential to remember that the pathological process may not only involve the middle ear, but also the Eustachian tube, nasopharynx and nose as well. Acute non-suppurative otitis media is a frequent complication of the common cold and, as such, it may cause otalgia and a low-grade fever. If the drum is not bulging it will respond to measures which restore aeration of the middle ear and certainly there is no indication for antibiotics. If the drum is bulging, a myringotomy is indicated and should be carried out. This procedure has become a neglected one in the treatment of an acute aural process because of the supposition that antibiotics cure all patients with middle ear disease. Too many have felt that it was unnecessary to carefully inspect the tympanic membrane and determine just what pathological process was involved. Many patients with a mild otitis media would get well with the use of decongestants alone, yet their recovery has been attributed to one-shot of penicillin. There is increasing evidence that this promiscuous and inadequate form of therapy is one of the most hazardous features in the treatment of acute otitis media. This practice is a total disregard of sound surgical principles and should be discouraged whenever possible. If we could but recall the caution which was experienced when the sulfa drugs first came out and respect the antibiotics in the same manner, we would use them more judiciously. Those of us who remember this early era of modern therapy can still remember the warnings as to the use of those chemotherapeutic agents. Even though it is admitted that our present drugs are not as toxic as the early sulfas, we still must be ever mindful of the potentialities of their power. Twenty years ago an axiom was associated with these wonder drugs which was very carefully adhered to by all who used them. This axiom stated that the sulfas should not be administered for mild infections and that when they were used, they were given in sufficient dosage to obtain effective results. Today, unfortunately, many of us disregard these early admonitions.

As far back as 1939, authors reported the masking effect of sulfanilamide in otogenous infections, and subsequent mastoid involvement. They warned against be-

*Department of Otolaryngology, Sisters Hospital, Waterville, Maine.

ing lulled into false security by the disappearance of symptoms and they recommended the use of these drugs in only the more severe cases. Perhaps this conservatism was carried too far, yet it was of some benefit.

Today everyone is treating ear infections because they feel that surgical mastoids have become a rarity and they assume that all otitis media will respond to some type of antibiotics. Many physicians who have had no training in otology are in this category and they blindly place their entire faith in the use of the antibiotics.

It seems pertinent at this time to briefly review some of the sound principles of otologic care. As I have previously mentioned, this should have as its chief objective not only to heal the otitis media and prevent intracranial complications, but also to aid the return of the hearing function to normal. This can be accomplished by keeping the ear canals clear and directing decongestant therapy in the nose and nasopharynx. If the drum is bulging, a myringotomy is indicated and should be done. It has been frequently noted that the incident of otic complications is more frequent in ears in which a spontaneous perforation has taken place than those in which a myringotomy has been carried out when indicated. Mastoiditis occurs three times as often in these ears in which spontaneous rupture has occurred. The use of modern drugs and all of their healing power has not changed this ratio of complications.

If this conservative therapy fails to produce the desired results and suppurative otitis media develops as manifested by continued pain, fever, and purulent otic discharge; then antibiotic therapy is certainly indicated. If it is decided to use an antibiotic, the patient should be questioned as to possible allergic reactions to the various drugs which might be used. Very often a patient has experienced a severe reaction to a drug and yet he will not mention it until questioned about it. It is always wise when possible to carry out a bacterial sensitivity test with the purulent discharge in the hope that one antibiotic will prove to be most effective. During the interval required for the sensitivity test, some antibiotic of the physician's choice should be administered without waiting for a laboratory report. Having decided upon the drug, then it should be given in the full dose and this dose should be maintained until the patient has fully recovered. This means that the drug should be given for at least two days after all symptoms have subsided. In my hand, penicillin is frequently ineffective and I have found that the use of triple sulfa in conjunction with antibiotic enhances its effectiveness. The use of antibiotics without myringotomy has caused many patients to pass through the acute phase of the otic infection only to find that they have a chronic discharging middle ear; or even, mastoiditis. The practice of allowing the ear drum to rupture without surgical aid is asking for otic complications. Exudates frequently remain in the middle ear and this may produce chronic low-grade inflammatory and adhesive changes with subsequent hearing impairment. Unfor-

tunately, the antibiotics are discontinued very often when the patient is free of pain and when the temperature is normal. Subsidence of pain and fever are not criteria for discontinuation of the drug, because at this point there is almost always a residual infection within. If discontinued too soon, a recurrence of the infection is often seen and mastoid involvement is masked by a lack of clinical signs and symptoms.

The typical case of acute mastoiditis characteristically presents certain classical signs and symptoms which the surgeon has been taught to respect. I shall not enumerate the various cardinal signs and symptoms of mastoid involvement, but rather a few orthodox signs which the physician always expects to find. Prior to the advent of modern therapeutics a few positive signs would manifest and the diagnosis of mastoiditis could be positively established upon observing the following otic complications. First and most common, a profuse purulent discharge from the middle ear. Sagging of the posterior superior canal wall was another most dependable sign. Fever, pain, leucocytosis and mastoid tenderness were to be expected in mastoid involvement.

During the past year, I have observed several causes of mastoiditis which might be termed bizarre following the use of antibiotics, inasmuch as the classical signs and symptoms were absent. I shall not discuss the cases individually, but rather as a group. All of these cases had received some form of antibiotic for otitis media and none of them had had the benefit of a myringotomy. Some had experienced a spontaneous perforation of the tympanic membrane, and others, not even the benefit of this form of nature's assistance. Two cases were children with slight swelling behind the ear and x-rays suggestive of mastoid involvement. There were no other otic signs and the tympanic membranes were white and without perforation. Mastoid surgery was carried out without touching the middle ear. Twenty years ago this was an almost unheard-of type of mastoiditis. Another case concerns a nine-year old child who apparently was treated for otitis media with antibiotics which were given inadequately, sporadically, and in an uncontrolled manner. A few days before admission the patient complained of severe pain in the ear, which, incidentally did not present a purulent discharge. X-ray studies showed some destruction of the intercellular septum within the mastoid process. A minimal amount of mastoid tenderness was present. Shortly after admission, signs of early meningitis became evident. A simple mastoidectomy not only revealed a surgical mastoid, but also, pus over the dura. The case responded to surgical drainage and intensive antibiotic therapy. This case showed the masking effect when modern drugs are injudiciously used in the treatment of otitis media. It also shows the value of the antibiotics after a surgical focus has been thoroughly removed, provided such therapy is given careful supervision. Other cases of surgical mastoid were detected by x-ray studies even though the

Continued on page 327

The Tissue Committee At Work

OVID F. POMERLEAU, M.D.*

For the past fifteen years there has been an increasing amount of discussion in medical literature, staff medical meetings, and the lay press on the subject of unnecessary surgery. All agreed that it was a growing and pressing problem and that it only affected a small minority of surgery performed. Steps were then taken to correct this, and by 1948 medical publicity was given to the formation of tissue committees in hospitals. The function of such committees was not well understood at first by physicians and initial attempts to form a tissue committee were usually tabled or deferred. The usual argument against it was, that it was only good for large hospitals. Another reason that it was not brought out openly was that no one felt that he was doing unnecessary surgery, and many were unwilling to let a committee scrutinize charts to see if the surgery was justified.

Most hospitals now have a tissue committee and it is required by the joint committee on the Accreditation of Hospitals. It is now proven that it is the smaller hospitals that benefit the most. The presence of a large staff, department heads, residents and interns all provided a degree of supervision and control for the larger teaching hospital. In 1948 a move was made to form a tissue committee at the Sisters Hospital, but not until 1955 was a definite tissue committee formed. The Chief of Surgery was made chairman with four other staff members including the radiologist, an internist (at this hospital the medical director), the pathologist, and a general surgeon.

For educational reasons the committee changes personnel yearly except for the Chief of Surgery and the Medical Director. A pathologist is very useful but is not essential. In the last few years he has not been a member due to a busy schedule and it has not lessened the efficiency of the committee.

The medical staff was briefed by the Medical Director that the tissue committee was advisory and fact-finding, its aim being to establish the justification of surgery performed in the hospital, and protect the patient against needless operations. The Staff was also assured that the committee was not out to condemn any surgeon, and all transactions would be handled with propriety.

The Tissue Committee meets after the regular monthly Staff meeting. The record librarian has ready all records of the operations where tissues were removed during the previous month. During the meeting there is only one question in the mind of the committee:

"Was surgery justified?" All charts are divided into two main groups.

1. Does the preoperative diagnosis, postoperative diagnosis, and pathological diagnosis agree? If all three above items agree this is accepted by the committee as justified surgery and needs no discussion.
2. When the preoperative, postoperative and pathological diagnosis differ the charts are set aside. Doubtful cases as well as laparotomies, lysis of adhesions, presacral neurectomies, and uterine suspensions are brought up for further study mostly for justification and not to evaluate all the aspects of the care of the patient.

The pathological report is not taken as the sole criterion for justification. The clinical evidence for indication of surgery is evaluated. All charts that are studied are divided into three classes: (a) justified, (b) questionable, and (c) unjustified. The comments made by the committee on the unjustified cases are given to the attending surgeon in a sealed envelope and he is requested to write his comments on the factors that influenced his decision to operate. The record is again reviewed at the next meeting. Records of the meeting are kept, including all comments. A copy of the report is given to the Executive Committee of the hospital.** This is read and discussed at their regular monthly meetings. This committee has jurisdiction over the Staff and steps can be taken for action on the findings of the tissue committee. At the regular monthly staff meeting, the report is read and open discussion ensues usually from an educational point. Several times a Staff member has been designated by the committee and reports to the Staff on some controversial procedures.

The surgical staff of the Sisters Hospital is an open staff, being made up of physicians with varying types of training and experience. It is apparent to the author who has served on the tissue committee since its formation that the quality of surgery at the hospital has definitely improved and the surgeons themselves have benefited by such an appraisal of their work along with the general educational aspects of the reports. The weak points that were encountered at first were: 1. Poor charts; 2. Inadequate consultation; 3. Inadequate work-

*Surgical Staff, Sisters Hospital, Waterville.

**Comprises the department heads and two physicians from the general staff.

up; 4. Doubtful surgery. After a few comments on the above were made a definite improvement was noted. The major improvements that the tissue committee accomplished in the hospital are as follows:

- 1. Better records.
- 2. Better preoperative and postoperative care.
- 3. An increase in consultations.
- 4. A definite drop in doubtful and needless surgery.
- 5. A drop in exploratory laparotomies.
- 6. The disappearance of procedures such as lysis of

- adhesions, uterine suspensions, and presacral neurectomy and subtotal hysterectomy.
- 7. The adoption of procto-sigmoid examinations preceding hemorrhoids.
- 8. Longer observation of children with vague abdominal pain preceding surgery.
- 9. The adoption of stripping of veins over ligation and injection of sclerosing agents.

The following table is a summary of the work done by the tissue committee.

TABLE I

Year	Total Charts	Agreed	Differed	Justified	Questionable	Unjustified
1955						
(last 3 mos.)	149	103	46	41	5	0
1956	561	486	75	50	24	1
1957	574	497	84	74	2	8
1958	843	780	63	56	8	0
1959						
(1st 6 mos.)	450	424	26	22	4	0

It has been my aim in this paper to portray the tissue committee at work in a small hospital and to point out that definite improvements can be obtained by:

- 1. Determining the justification for surgery.
- 2. Making the comments available to the attending surgeon by sealed envelope and requesting his comments.

- 3. Reporting the information to the Executive Committee which has judicial power.
- 4. The educational value of the open discussion of the comments at regular staff meetings.

177 Main Street, Waterville

ANTIBIOTICS AND BIZARRE MASTOIDITIS — *Continued from page 325*

temperature and white blood count were within normal limits. Several cases showed a minimum of positive x-ray findings and yet frank pus was found at surgery within the mastoid cells. These cases complained of otalgia following acute otitis media which was supposedly cured by antibiotics.

In summary, I do not condemn the use of antibiotics in the treatment of otitis media, for their judicious use has saved countless patients needless suffering and the burden of long hospitalization. I do say that they should not be used on every case, but rather on complicated cases which have had the benefit of a surgical myringotomy. If there is any question about delayed recovery, then such cases should be carefully observed and repeated x-ray studies should be carried out. Although the

incidence of cases requiring mastoid surgery is constantly decreasing, there shall always be sufficient numbers to prevent mastoid surgery from becoming a lost art.

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177 Main Street, Waterville

A Community Geriatric Health Survey

COMMITTEE ON AGING

THAYER HOSPITAL, WATERVILLE, MAINE

In this country 2,000 people every day become 65. There are 15,000,000 people over 65 who are receiving Old Age Survivors' Insurance and Social Security benefits. The Forand Bill which intends to pay hospital cost, nursing home cost, and surgical expense for this group assumes that these people are receiving inadequate medical care.

Waterville is a community of 18,500 in central Maine with 1,865 over the age of 65. We feel that health care of the aged is a responsibility of the individual, the community, the state, and the federal government. From the community level, an understanding of the problem was felt essential prior to measures for its solution.

A survey was done to determine the unmet medical needs of people over 65 in Waterville, Maine, living in their homes. Planning for the survey was carried out in cooperation with the state Department of Health & Welfare to assure epidemiological and statistical significance. Interviewers were volunteers from the community who were given a brief course of instruction.

Two hundred fifty four (254) of the 1865 were interviewed. Although other features such as economic status, education, recreation and dwelling were included, only the health survey portion is reported here.

HEALTH SURVEY SUMMARY

Eighty six per cent (86%) had acceptable health; 129 of the 254 had a health problem. Of these, musculoskeletal diseases (31.8%), circulatory diseases (25.6%), and nervous diseases (23.3%) comprised the bulk of the health problem. Sixty six percent (66%) of 129 had a health problem of over five years' duration. Eighty four and one half per cent (84.5%) of 129 were under the care of a physician. Forty seven (47) of the 129 had a problem keeping them from

work; 60.2% of the 254 had false teeth; 16.9% had all or most teeth missing, i.e., needed dental care. Depression occurred periodically in 32.7% of the men and 19.1% of the women. Alcoholic consumption was small — four regular drinkers.

Of those interviewed:

- 36.2% have a check-up once a year.
- 19.3% have a check-up twice a year.
- 81.9% have a regular doctor.
- 10.6% have attended a clinic.
- 87% prefer a doctor to a clinic.
- 58.7% have no medical insurance.
- 22% have Blue Cross or Blue Shield.
- 16.5% have other insurance.

IMPRESSIONS

Eighty six per cent (86%) of oldsters living in homes in Waterville have fair to good health. Rheumatic, circulatory and nervous diseases are the most frequent health problems. Chronicity of health problems is present in 60%. Most are under the care of a physician. A significant number are kept from work by a health problem. There is need for dental care in 16.9%. Depression occurs periodically in a surprising number, mostly in males. Alcoholism is not a problem in this group. Twenty (20) out of 254 had a health problem and were not seeking help.

Significance of this study:

(1) The problem is not great and should and could be handled by expanded existing medical facilities, and existing medical care systems.

(2) Such studies as this bring a community to a proper orientation in its health responsibilities.

(3) Such studies in many communities would more clearly point out to our legislators the real extent of the health problems of the aged.



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Across The Desk

Caution Urged When Giving Antibiotics

A governmental scientist recently urged physicians to take great care when administering antibiotics.

Henry Welch, Ph.D., said that between 17 and 20 million persons in the United States may be allergic to large doses of the drugs and react unfavorably.

His report appears in the (Aug. 22) Journal of the American Medical Association.

Dr. Welch, who is director, division of antibiotics of the Food and Drug Administration, feels that the danger of persons receiving too many antibiotics has been increased by the use of the drugs in fields other than medicine.

He said, "There are now over 400 preparations of antibiotics available for clinical use, and they run the gamut of injectables, ointments, powders, sprays, capsules, syrups, ear and eye drops, suppositories, troches, and tablets."

Also the drugs are being used in animal nutrition for promotion of growth in swine, chicks, and poults, as well as being employed as crop sprays to prevent blight in apples, pears, walnuts, and beans.

Dr. Welch said, "Antibiotics have saved tens of thousands of lives in the past 15 years, and the reduction in the rates of mortality, morbidity, and complications of diseases has affected the lives of millions.

"Nevertheless, with such major advances in therapy and consequent wide use, unfortunately we have to face the accompanying untowards side-reactions that invariably follow."

He pointed out that normally these side-effects are

not too severe but can be uncomfortable. They run the range from mild rashes, asthmatic attacks, and in some instances to fatal shock.

The scientist said that the Food and Drug Administration along with other agencies have taken steps to alleviate this problem as it pertains to direct and indirect injection of antibiotics in foods.

It is, he concluded, up to the physician to take proper steps in administering the drugs in order to avoid these unfavorable side-reactions.

Oral Polio Vaccine — One Tablet May Immunize The Whole Neighborhood

A strong possibility that oral polio vaccine given to a segment of the population could effectively vaccinate the entire nation was suggested today by a group of Tulane University researchers.

Their conclusion, based on the results of a scientific study, indicates that the immunity gained from the vaccine could be passed on from one person to another.

Such a development, they reported in the (Aug. 22) Journal of the American Medical Association, "would be vaccine induced 'herd protection' of a level not yet achieved with any immunizing agent."

While the study is small in size and additional research is necessary, it appears that the immunity a child would receive from the oral vaccine can be passed on to other children, ultimately immunizing the entire community.

Headed by Dr. Henry M. Gelfand, New Orleans, the

researchers performed their study with the assistance of 56 families in which one member, usually a child, was given attenuated strains of polioviruses.

The viruses were weakened to the point where they could not cause polio but would stimulate the body to set up defenses against the viruses. The result is an immunity to polio just as if a person had contracted the disease and recovered.

In the New Orleans study, Dr. Gelfand said, "No illness was associated with either primary vaccine administration or contact infection."

Since the vaccine did provide transmittable immunity without causing infection, the doctor was led to suspect that if administered to enough persons, the live viruses could ultimately wipe out the "wild" or disease-causing strains.

The 56 families engaged in the study had all previously received Salk polio vaccine and were divided into three groups according to social and economic levels.

The oral viruses were provided by Dr. A. B. Sabin, of the University of Cincinnati, and were administered in the home by members of the staff by squirting the virus into the back of the person's mouth, after which they were given a glass of water.

The results showed, "All except one adult became infected after the feeding of at least 100,000 infectious units, and transmission to many contacts was detected."

Dr. Gelfand also pointed out that the one variable which played a role in controlling the extent of transmitting immunity was social and economic status.

"Only nine per cent of susceptible contacts from the upper economic group became infected as contrasted with 53 per cent among households from the lower economic groups," he said.

The doctor noted that this is contrary to what normally happens in a polio epidemic where natural poliovirus transmission infects almost all contacts, regardless of social or economic status. "This is probably to be explained by the less infectivity of the attenuated strains," he concluded.

Study Shows Extent Of Venom Deaths

Nearly as many Americans die from bee stings as from rattlesnake bites, a new study has shown.

In addition, they die from the bites and stings of wasps, hornets, yellow jackets, ants, cottonmouth moccasins, coral snakes, scorpions, spiders, and sting rays.

Dr. Henry M. Parrish, University of Vermont College of Medicine, Burlington, studied the death certificates of all persons in the United States who died from bites and stings of venomous animals and insects during the five-year period 1950 through 1954. The study is reported in the August issue of *Archives of Internal Medicine*, published by the American Medical Association. There were 215 deaths, with an average of 43 a year, and an average death rate of 0.28 per 1 million population per year.

The Hymenoptera — bees, wasps, hornets, yellow jackets, and ants — killed 86 persons (40 per cent), while poisonous snakes — rattlers, cottonmouth moccasins, coral and unidentified — killed 39 persons (18 per cent). Rattlesnakes killed 55 persons, while bees killed 52.

More children died of snake bites than from bee stings, apparently because bee sting deaths are actually severe allergic shock reactions and the person must previously have been sensitized to the insect venom. In addition, children get a proportionately larger amount of snake venom according to body weight than do adults, Dr. Parrish said.

Other animals and insects causing death were scorpions (5), spiders (39), Portuguese man-of-war (1), and sting ray (1). Twelve other deaths were caused by unknown animals and insects.

Centipedes, millipedes, Gila monsters, poisonous fishes, copperhead moccasins, and tarantulas were not reported to produce any death. This does not mean that they are not poisonous, but it does indicate that they are not a major source of human deaths in the United States, Dr. Parrish noted.

He believes that previous estimates of the incidence of bites and stings by venomous animals are far too low. Very likely, he said, deaths in the United States from venomous animals are attributed to other causes on death certificates. This is especially true of Hymenoptera-caused deaths, since these allergic shock reactions are easily misdiagnosed, he said.

The study also showed:

— Males were fatally bitten and stung about 2.6 times as often as females.

— Usually several hours elapsed between the snake and spider bites and the victims' deaths, while most deaths from Hymenoptera stings happened within one hour after the sting. These deaths were attributed to the shock reaction to insect allergy.

— Deaths were reported in 34 of the 48 states. The highest average death rates per 1 million were found in Arizona, Georgia, Texas, Florida, and Mississippi.

— Deaths occurred more often during the warmer months of the year, from April through October. This reflects changes in the life histories of the animals and the more out-of-door exposure of man through occupation and recreation.

— Deaths from poisonous spider bites were reported in 16 states. The regions with the highest average death rates were West South Central, East South Central, and South Atlantic. No deaths were reported in the New England and Middle Atlantic regions.

— The *Latrodectus* spiders are usually considered to be the only poisonous spiders in the United States. The best known of the three species is the *Latrodectus mactans* or "black widow." At least one species is found in every state.

In commenting on the study, Dr. Parrish said that while venom poisoning can hardly be classed as a major

medical problem, it is much commoner than formerly recognized.

Most previous estimates of the number of bites and stings by venomous animals and insects probably are far too low, he said, perhaps because they were based on medical journal reports (where only unusual or severe cases are reported) and news stories.

Since venomous insects and animals are found in every state, "it behooves a physician to find out which species are indigenous to his state, to become familiar with the clinical manifestations of venom poisoning, and to keep up with the latest therapy . . ." Dr. Parrish concluded.

Cholesterol Role In Heart Disease Still Unknown

The significance of lowered blood cholesterol levels in the prevention and treatment of heart disease is not definitely known, according to the American Medical Association's Council on Foods and Nutrition.

Methods of manipulating the blood levels of cholesterol have become of utmost interest, and because their importance is unknown, confusion has resulted, the council said in a report in the (Aug. 29) A.M.A. Journal.

In an attempt to keep physicians informed of current knowledge about cholesterol, the council presented the views of five foremost researchers in the field.

"Of all the chemical compounds that are measured in clinical laboratories, there is none about which more has been written and about which less is understood than cholesterol," according to Dr. Lawrence W. Kinsell, Institute for Metabolic Research, Highland-Alameda County Hospital, Oakland, California.

It is well established, he said, that, statistically, elevated levels of cholesterol are found in association with atherosclerosis (one form of hardening of the arteries). It seems reasonable, therefore, to believe that measures directed toward lowering the levels may work in a desirable way.

However, since cholesterol is a normal essential part of the human body, "it is obvious that attempts to 'get rid of' this compound would be both unphysiological and impossible," Dr. Kinsell said.

The objective, then, must be to achieve normal cholesterol metabolism with consequently normal blood levels in the hope that such a program will prevent abnormal deposits of cholesterol in the blood vessels, he said.

Among the methods mentioned by the physicians are the use of diet, such drugs as nicotinic acid, estrogens, and increased exercise.

The significance of lowered levels hinges on the question: How fundamental is the role of this substance in the development of atherosclerosis?

According to Dr. W. Stanley Hartroft, of the department of pathology, Washington University Medical School, St. Louis, rat studies at his school have shown

that the development of heart disease in an individual rat could not be predicted on the basis of its level of cholesterol.

This and other studies have suggested that when all the facts are uncovered, it "is not unlikely" that some other substance or substances in the blood may have a more direct bearing on the problem of atherosclerosis than does cholesterol, Dr. Hartroft said.

Research into the role of cholesterol and other factors must, of course, continue, he said. But in the meantime, there is probably little reason to recommend attempts to lower cholesterol levels in the blood of healthy men and women as long as those values fall within the usual ranges for people in the United States.

Dr. Edward H. Ahrens, Jr., and his co-workers at the Rockefeller Institute, New York, agree with Dr. Hartroft. They said, "Widespread, drastic revision of dietary practice seems unwarranted at this time." They hope that a more certain and direct approach to the prevention of atherosclerosis will be forthcoming as knowledge increases.

Dr. Ahrens listed several points of agreement concerning cholesterol. They are:

- Substitution of dietary fats rich in polyunsaturated fatty acids (such as those found in vegetable oils) for those rich in saturated fats (found in hard fats such as butter) will lower cholesterol levels in almost every person, whether he has normal or above-normal cholesterol levels.

- The greater the substitution, the greater the effect; thus little benefit is obtained by merely adding a supplement of polyunsaturated fat to an otherwise unchanged diet.

- The effects of substitution are due to differences in fatty acid structure and not to trace factors such as vitamins, minerals, sterols, or other undefined nonfatty acid substances.

- The oral administration of other agents, such as nicotinic acid, also decreases serum cholesterol levels, but presumably by other mechanisms.

Dr. Joseph M. Merrill, Veterans Administration Hospital, Nashville, Tenn., warned that drugs and diets are still in their experimental stage and probably should be left to the investigator.

Fever Needs Food, Water, According To Doctors

A fever must be watered and fed, not starved, two Chicago physicians said today.

Fever leads to dehydration and the breakdown of body tissues. At high temperatures, the body cells work faster and break down more rapidly. To replace them, the body needs food and water.

Drs. Rachmiel Levine and Sidney Cohen of the Medical Research Institute of Michael Reese Hospital gave their advice in an interview reported in the (September) Today's Health, published by the American Medical Association.

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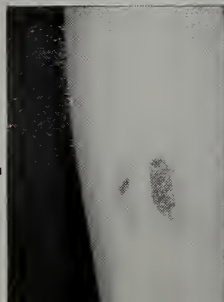
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When a fever reaches 103 or more, it becomes dangerous, they said. It leads to the malfunction of the central nervous system and heart because every degree of fever makes the heart beat faster, and over a certain beat rate, fever becomes injurious to the heart.

The seriousness of a fever depends on age, persistence, and variability, the doctors said. A child's body temperature will react more drastically with a fever than an older person's. The older a person grows the less drastic and slower are his reactions to fever-causing agents.

Whether a fever persists day after day and whether it has peaks at certain times a day influence its seriousness.

Fever, according to the doctors, is a symptom or indicator; it is not a disease. It may be associated with infections, cirrhosis of the liver, gout, neoplastic diseases, vascular accidents, pregnancy, food intake and excessive fatigue. It may be caused by hypersensitivity to drugs.

There is no general remedy for fever, although aspirin is often given, they said. Fever induced by infection is reduced by eliminating the infectious germs.

Fever should be considered as an indicator that something may be wrong and should be thoroughly investigated, they said. The best way is to check with a doctor.

However, a person should not become obsessed about slight elevations in body temperatures, once examination has shown no cause for the slight rise in temperature. Some persons just normally have a higher than "normal" temperature all the time.

Malpractice Stopper — Examiners Of Insane Convicts

The *only* physicians who may examine convicts (inmates of county and state prisons) for insanity, are those individual physicians who have been appointed by the Government to do so.

Supply Of Physicians

The government's future course as onlooker or active financial participant in the training of doctors will be influenced in no small measure by recommendations

that are to be made soon by the Bane Committee. For many months this advisory group to Surgeon General Leroy E. Burney has been working on the problem of physician output — adequacy, financial support of training institutions and students, feasibility of Federal aid with a minimum of Federal regulation, etc.

Medicare Change — Maternity Care After Husband's Death

A dependent wife who is eligible for civilian medical care, whose husband dies while on active duty, and who is pregnant at the time of his death, may be provided, from civilian sources at government expense, the obstetrical and maternity care authorized in Section 5-503D(2) of the cited Joint Directive, including authorized postpartum care for the child.

The widow will be required to surrender DD Form 1173 authorizing medical care in both civilian and uniformed services facilities and will be issued a new DD Form 1173 authorizing medical care in uniformed services facilities only.

When appropriate, the official who issues the new DD Form 1173 will provide the widow with a letter, in triplicate, indicating that:

Notwithstanding the fact that the DD Form 1173 in her possession does not authorize medical care in civilian facilities, she is authorized obstetrical and maternity care from civilian sources at government expense if it is determined that she was pregnant on (date of husband's death).

Possession of the letter, and identification of the individual as the one named in said letter, is sufficient authorization for the required care without the possession of a DD Form 1173. Accordingly, the contractual requirements for completion of Items 6 and 7 of the claim form, DA Form 1863, are waived in these cases.

A copy of the letter *must* be attached to the DA Form 1863 submitted by the civilian physician and/or hospital providing care under these circumstances.

The widow shall have free choice between civilian and uniformed services facilities for the care authorized herein.

This policy is effective 28 July 1959 and does not apply to deliveries before that date.

Fall Clinical Session
of the
Maine Medical Association

at
Bangor, Maine

DECEMBER 11, 12, 1959

During Bangor's 125th Anniversary

Maine Medical Association

SPECIAL COMMITTEES — 1959-1960

The following Special Committees for 1959-1960 have been appointed by the President, Allan Woodcock, M.D., of Bangor

Amy W. Pinkham Fund Committee

Norman H. Nickerson, M.D., Greenville, Chairman
Virginia C. Hamilton, M.D., 900 Washington St., Bath
Albert M. Carde, M.D., 33 Elm St., Milo
Thomas A. Foster, M.D., 131 State St., Portland
Ella Langer, M.D., State House, Augusta
Forrest B. Ames, M.D., 255 Hammond St., Bangor

Arthritis Committee

Philip P. Thompson, Jr., 704 Congress St., Portland, Chairman
Joseph A. Marshall, M.D., 177 Main St., Waterville
Robert O. Kellogg, M.D., 316 State St., Bangor
Charles R. Glassmire, M.D., 58 Deering St., Portland

Committee on Disaster Medical Care

Charles W. Steele, M.D., 472 Main St., Lewiston, Chairman
Harry Butler, M.D., 77 Broadway, Bangor, Deputy Chairman
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1st — Ralph A. Getchell, M.D., 690 Congress St., Portland
2nd — Ralph A. Goodwin, Sr., M.D., 56 Denison St., Auburn
3rd — Edward K. Morse, M.D., 22 White St., Rockland
4th — Allan J. Stinchfield, M.D., 16 E. Chestnut St., Augusta
5th — James H. Crowe, M.D., 121 Main St., Ellsworth
6th — Richard C. Wadsworth, M.D., 489 State St., Bangor
Members-at-Large
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Clark F. Miller, M.D., 46 Madison St., Auburn
Clyde I. Swett, M.D., 18 Sherman St., Island Falls
Dean Fisher, M.D., State House, Augusta
Frederick T. Hill, M.D., Thayer Hospital, Waterville
Blood Transfusion Committee Members
Charles F. Branch, M.D., Central Maine General Hospital, Lewiston
Franklin F. Ferguson, M.D., 22 Arsenal St., Portland
Nelson P. Blackburn, M.D., 489 State St., Bangor

Committee on Conservation of Vision

Dexter J. Clough, 2nd, M.D., 224 State St., Bangor, Chairman
Howard F. Hill, M.D., 33 College Ave., Waterville
Paul Maier, M.D., 723 Congress St., Portland
Paul E. Floyd, M.D., 2 Middle St., Farmington
Otis B. Tibbetts, M.D., 33 Court St., Auburn
Ralph A. Goodwin, Jr., M.D., 33 Court St., Auburn

Committee on Industrial Health

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Albert P. Royal, Jr., M.D., 82 Maine Ave., Rumford
Edwin W. Harlow, M.D., 177 Main St., Waterville
Eugene P. Wolfhart, M.D., 338 Main St., Saco
William A. Monkhouse, M.D., 131 State St., Portland

Committee on Alcoholism

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Paul A. Jones, M.D., Union

Committee on Aging

George J. Robertson, M.D., 33 College Ave., Waterville, Chairman
Charles A. Hannigan, M.D., 85 Goff St., Auburn
Vaughn R. Sturtevant, M.D., 33 College Ave., Waterville
Eustache N. Giguere, M.D., 90 Webster St., Lewiston
Robert O. Kellogg, M.D., 316 State St., Bangor
Brinton T. Darlington, M.D., Westwood Rd., Augusta
Leon R. Jellerson, M.D., Elm St., North Berwick

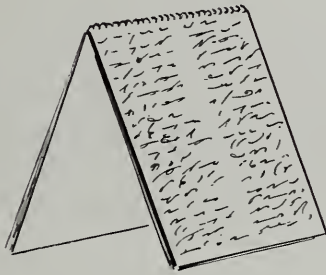
Joint Committee of Nursing and Medical Problems*

Paul S. Hill, Jr., M.D., 323 Main St., Saco, Chairman
Eugene E. O'Donnell, M.D., 32 Deering St., Portland
Philip P. Thompson, Jr., M.D., 704 Congress St., Portland
James A. MacDougall, M.D., 303 Penobscot St., Rumford

Committee on Hospital Infections*

George F. Sager, M.D., 18 Bramhall St., Portland, Chairman
Brinton T. Darlington, M.D., Westwood Rd., Augusta
Charles D. McEvoy, Jr., M.D., 316 State St., Bangor
Representing County Medical Societies
Charles F. Branch, M.D., Central Maine Gen. Hosp., Lewiston (Androscoggin)
Raymond G. Giberson, M.D., 555 Main St., Presque Isle (Aroostook)
Morrill Shapiro, M.D., 29 Deering St., Portland (Cumberland)
Wallace H. Duffy, M.D., 100 Main St., Farmington (Franklin)
Llewellyn W. Cooper, M.D., 194 Main St., Bar Harbor (Hancock)
Brinton T. Darlington, M.D., Westwood Rd., Augusta (Kennebec)
John A. Root, M.D., 22 White St., Rockland (Knox)
Mary J. Tracy, M.D., Bristol St., Damariscotta (Lincoln-Sagadahoc)
Albert P. Royal, Jr., M.D., 82 Maine Ave., Rumford (Oxford)
Charles D. McEvoy, Jr., M.D., 316 State St., Bangor (Penobscot)
Francis W. Bradbury, M.D., 16 E. Main St., Dover-Foxcroft (Piscataquis)
H. Carl Amrein, M.D., 29 Weston Ave., Madison (Somerset)
George L. Temple, M.D., 18 Franklin St., Belfast (Waldo)
George N. Nackley, M.D., 1 School St., Machias (Washington)
Maurice Ross, M.D., 372 Main St., Saco (York)
State of Maine
Alta Ashley, M.D., Dist. III Health Office, Augusta

*Appointed in March, 1959 by Eugene E. O'Donnell, immediate Past President.



From the Secretary's Notebook

Council Meetings During Annual Session

The Council of the Maine Medical Association met on the day preceding the 106th annual session at The Samoset in Rockland in June and daily throughout the session in accordance with the By-Laws.

The first of these meetings, the last official meeting of the 1958-1959 Council, was on Saturday, June 20. This was a four-hour session called to order at 2:05 p.m. by the Chairman, Wilson H. McWethy, M.D., of Augusta.

The Budget for 1959-1960, which was published in the August issue of the Journal, was the first item on the Order of Business. Careful consideration was given to the Auditor's report as published in the June Journal and to each item of the proposed budget before it was approved for presentation to the House of Delegates for final action.

The feasibility of establishing a Medical School in Maine was discussed at length and it was agreed that this matter be given careful consideration and discussed further at the next meeting of the Council.

A request from Governor Clauson that we present the names of two members to serve on the Board of Registration of Medicine resulted in the nomination of Drs. Eugene E. O'Donnell and Daniel F. Hanley. The Council Chairman was instructed to notify the Governor to this effect.

At the suggestion of Charles W. Steele, M.D., of Lewiston, Chairman of the Civil Defense Committee, the name of this committee was changed to the Disaster Medical Care Committee.

The organization meeting was held on Sunday, June 21 and the officers elected were published in the August issue of the Journal. Present at this meeting were members of the 1958-1959 Council consisting of Drs. E. E. O'Donnell, Allan Woodcock, W. H. McWethy, F. A. Winchenbach, J. A. MacDougall, C. E. Richards, R. L. Allen, R. C. Stuart, R. G. MacBride, P. P. Thompson, Jr., D. F. Hanley, and the newly elected Councilors, Drs. E. W. Stein and J. F. Dougherty.

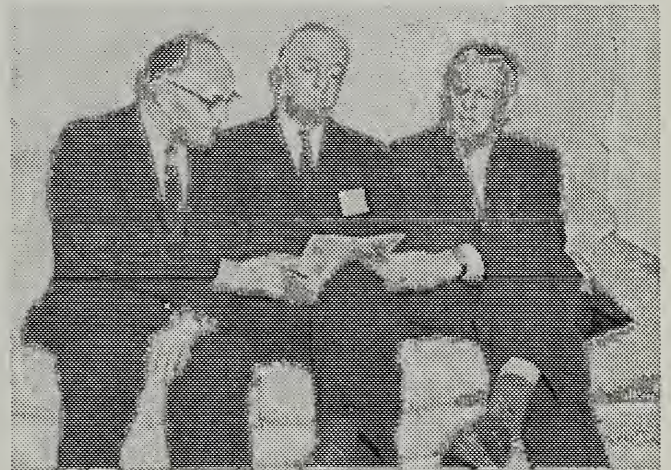
The Medical School proposition was again discussed and it was voted that the President appoint a committee within the Council to look into this matter.

The third meeting was called to order at 9:00 a.m. on Monday, June 22 by the Chairman, Dr. Richards.

Discussion at this meeting centered around the Medical School proposal, matters concerning the Board of Ethics and Discipline and the 1960 Annual Session. Mrs. Kennard was instructed to find out about comparative dates at The Samoset for this meeting.

On Tuesday, June 23, the meeting was called to order at 12:30 p.m. by Dr. Richards.

It was voted to hold the 1960 Annual Session of the Maine Medical Association at The Samoset on Sunday, Monday and Tuesday, June 19, 20 and 21, with arrangements for the Council to meet on Saturday, June 18. Arrangements were also made with the management



Allan Woodcock, M.D., Bangor (center) President Maine Medical Association discusses council problems with President-elect Wilson H. McWethy, M.D., Augusta (left) and Council Chairman Carl E. Richards, M.D., Sanford.

of the hotel for a special rate for children for the Lobster Bake. This will be included in the Rate Card for the 1960 session.

On information that there was a possibility of another vacancy on the Board of Registration of Medicine, it was voted that the name of Linus J. Stitham, M.D., of Dover-Foxcroft, be recommended to the Governor.

Dr. O'Donnell appointed the following members to serve with him on the Medical School Committee: Allan Woodcock, M.D., Bangor, Wilson H. McWethy, M.D., Augusta, Daniel F. Hanley, M.D., Brunswick.



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

A Study of School Age Marriages—Maine, 1955

EDSON K. LABRACK, M.P.H.*

The tendency to marry young is increasing noticeably in the U. S. Statistics are available which indicate that the median age of brides has dropped by three years and that of grooms has dropped by two years over the past 50 years.

In late years the general lowering of the median ages of brides and grooms has been accompanied in Maine by a substantial increase in the number of "school age" marriages — that is, marriages where the bride or the groom is under 18 years of age. Between 1950 and 1958 the number of these marriages increased in Maine by 15.9 per cent. In 1958 the number of school age marriages was 1,309 or 17.3 per cent of all marriages.

This study represents an effort to find out what problems, if any, accompany the increase in school age marriages. It concerns 1,253 marriages in Maine in 1955

where either the bride or groom was under 18 years of age. Records of these marriages were coordinated with records of divorces granted in Maine during the years 1955, 1956, and 1957 to determine stability of these marriages. In marriages where either the bride or groom was under 16 years of age an effort was made to ascertain the interval between date of marriage and date of birth of the first child.

AGE OF THE BRIDE AND GROOM

There were 8,263 marriages in Maine in 1955. In 1,253 or 15.2 per cent of these marriages, either the bride or the groom was under 18 years of age. The number of brides under 18 years of age was 1,202. The number of grooms under 18 years of age was 158. Table 1 shows these marriages by age of the bride and by age of the groom.

TABLE 1
MARRIAGES BY AGE OF BRIDE AND GROOM
SCHOOL AGE MARRIAGES, MAINE, 1955

Age of Groom	Total	Age of Bride in Years									
		13	14	15	16	17	18	19	20	21	22
Total	1253	2	26	117	417	640	31	14	4	1	1
15	3	—	—	2	—	1	—	—	—	—	—
16	35	—	3	5	12	8	6	1	—	—	—
17	120	—	5	19	25	27	25	13	4	1	1
18	157	—	1	18	64	74	—	—	—	—	—
19	186	—	3	20	71	92	—	—	—	—	—
20	188	—	4	12	78	94	—	—	—	—	—
21	155	—	2	11	45	97	—	—	—	—	—
22	117	1	1	10	35	70	—	—	—	—	—
23	89	1	1	5	26	56	—	—	—	—	—
24	61	—	2	3	15	41	—	—	—	—	—
25-29	120	—	3	10	39	68	—	—	—	—	—
30-34	18	—	—	1	6	11	—	—	—	—	—
35-39	1	—	1	—	—	—	—	—	—	—	—
40-44	—	—	—	—	—	—	—	—	—	—	—
45-49	1	—	—	—	1	—	—	—	—	—	—
50-54	1	—	—	—	—	1	—	—	—	—	—
55-59	1	—	—	1	—	—	—	—	—	—	—

*Director, Division of Vital Statistics.

PREVIOUS MARITAL STATUS OF BRIDE AND GROOM

All of the grooms under 18 years of age in 1955 were being married for the first time. On the other hand, 10 brides, including one 16 year old and nine 17 year

olds, married for the second time. All of those remarrying were divorcees. Table 2 shows remarriages of the bride and of the groom by age of the bride and by age of the groom.

TABLE 2
REMARRIAGES OF BRIDE AND GROOM BY AGE OF BRIDE AND GROOM
SCHOOL AGE MARRIAGES, MAINE, 1955

	Bride			Groom		
	Total	Remarriages		Total	Remarriages	
		Bride	Groom		Groom	Bride
Total	1,253	10	60	1,253	60	10
13	2	—	—	—	—	—
14	26	—	2	—	—	—
15	117	—	4	3	—	—
16	417	1	21	35	—	—
17	640	9	33	120	—	2
18 and over	51	2	—	1,095	60	8

STABILITY OF SCHOOL AGE MARRIAGES

During the period under observation 60 in the study group ended in divorce. The divorce rate in the study group was 47.0 per 1,000 marriages as compared with

a rate of 57.0 in the general population. Two of the brides were divorced for a second time. Table 3 shows 1955 school-age marriages ending in divorce during the study period.

TABLE 3
DIVORCES AND DIVORCE RATES BY AGE OF BRIDE
SCHOOL AGE MARRIAGES: MAINE, 1955

Age of Bride	Total Marriages	Marriages terminated by Divorce	
		Number	Rate*
Total	1,253	60	47.9
13	2	—	—
14	26	1	—
15	117	8	68.4
16	417	23	55.2
17	640	26	40.6
18 and over	51	2	—

*Divorce rate per 1,000 marriages.

Children had been born to 25 of the 60 marriages ending in divorce during the period under observation.

Table 4 shows marriages ending in divorce by duration and by whether or not children were born to the couple.

TABLE 4
DIVORCES BY DURATION AND BY PARENTHOOD STATUS
SCHOOL AGE MARRIAGES: MAINE, 1955

Duration of Marriage	Total Divorces	Divorced	
		Children	Childless
Total	60	25	35
Less than 12 months	12	2	10
12-23 months	28	11	17
24-35 months	20	12	8

After the 1955 marriage had ended in divorce, 27 of the divorcees remarried other spouses during the study period. Among those remarrying were 17 brides and

10 grooms. In 8 cases where the marriage ended in divorce both the divorced bride and the divorced groom remarried other spouses.

MARRIAGES AT AGE 15 YEARS AND UNDER

Persons marrying at 15 years or under constitute a special group under the law since assent for such marriages is required of a judge of probate as well as parental consent. In any case where a person under 16 years of age files notice of intended marriage, the municipal clerk with whom marriage intentions are filed is required to notify the judge of probate in the county where the person under 16 resides. The judge may examine the case and may instruct the municipal clerk not to issue a marriage license if in his opinion the

marriage would not be in the interest of public welfare. There were 146 marriages in Maine in 1955 where one or both of the parties was under 16 years of age. The number of brides under 16 was 145 and the number of grooms under 16 years of age was three. At the time of marriage 70, or 48.3 per cent, of the brides under 16 years of age were from 1 to 8 months pregnant. During the study period 96, or 66.2 per cent of these brides gave birth to a child. Table 5 shows marriages where one or both parties was under 16 years of age by age of bride and generative status.

TABLE 5
AGE OF BRIDE BY INTERVAL BETWEEN MARRIAGE AND BIRTH OF FIRST CHILD, MARRIAGES AT AGE 15 YEARS AND UNDER MAINE, 1955

Age of Bride	Total Marriages	Number	Per cent	Number	Per cent	No Child
Total	146	71	48.6	24	16.4	51
13	2	1	50.0	1	50.0	—
14	26	13	50.0	4	15.4	9
15	117	56	47.9	19	16.2	42
16 and over	1	1	—	—	—	—

Divorce ended nine of these 146 marriages during the study period. The divorce rate for marriage at age 15 or under was 61.6 per 1,000 marriages. A child had been born to five of these divorced couples.

Maine's First Course In Nuclear Medicine

October 19-24, 1959 — Portland, Maine

BASIC NUCLEAR PHYSICS

Mercy Hospital, October 19, 20, 21 — 3:00 P.M. to 10:00 P.M.

Dr. Walter Small, New England Medical Center

Maine Medical Center, October 22 and 23 — 9:00 A.M. to 5:00 P.M. — October 24 — 9:00 A.M. to 12:00 Noon

Dr. Stanley E. Herrick, Jr., Preceptor

This course is jointly sponsored by Picker X-Ray Corporation, Mercy Hospital and Maine Medical Center.

Registration fee \$250.00 payable to Picker X-Ray Corporation, 12 Wirt Street, Brighton 39, Massachusetts. Advance registration by October 10 is desirable. For further information contact:

- Warren Harriman, Picker X-Ray — Portland, SPruce 2-0836
- Robert Beaudoin — Bangor 2-5656
- John J. Egan — Boston, STadium 2-9603



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A Geriatric Institute For Nurses

MELVIN BACON, M.D.*

The York County Tuberculosis and Health Association is sponsoring an "Institute on Geriatrics" for the Nurses of York County. This is to be held at Nasson College, Springvale, Maine. It will consist of four meetings which will be conducted on Mondays from 7:00 p.m. to 9:00 p.m. on October 19th and 26th and November 2nd and 9th, 1959. Because of the success attained at a previous program on tuberculosis it was decided to conduct another symposium this year. An outstanding program is planned. All nurses who complete the course will be awarded a certificate. Nurses from other areas are invited to attend. This meeting has the approval of the York County Medical Society and the Maine Medical Association. There will be no registration fee. "Knowledge comes to him who seeks it."

TENTATIVE PROGRAM

October 19, 1959

Registration
Introductory Remarks
The Physician's Role in Geriatrics
 Medical Aspects of the Geriatric Patient
 Surgical Aspects of the Geriatric Patient
 Psychiatric Aspects of the Geriatric Patient

October 26, 1959

Registration
Nursing Care of the Geriatric Patient
 In the General Hospital
 In the Nursing Home
 In the Home
 Rehabilitation Nursing

November 2, 1959

Registration
Miscellaneous Problems of the Aged
 Medico-Legal Relations
 The Geriatric Diet
 Dental Care of the Geriatric Patient
 Social Service and the Aged

November 9, 1959

Registration
Keeping the Aged Well
 Psychological Aspects of the Geriatric Patient
 Physiotherapy in Geriatrics
 Occupational Therapy of the Aged
 Vocational Rehabilitation of the Aged
Presentation of Certificates

*Sanford, Maine, Chairman of the Health and Education Committee of the York County Tuberculosis and Health Association, Fellow of the American Geriatric Society.

Announcements

Department Of Health And Welfare Division Of Maternal And Child Health, Including Services For Crippled Children

ORTHOPEDIC CLINICS

- Portland — Maine Medical Center
9:00 a.m.: Oct. 12, Nov. 9, Dec. 14
- Lewiston — Central Maine General Hospital
9:00 a.m.: Oct. 16, Nov. 20, Dec. 18
- Rumford — Community Hospital
1:30 p.m.: Dec. 16
- Waterville — Thayer Hospital
1:30 p.m.: Oct. 22
- Rockland — Knox County Hospital
1:30 p.m.; Nov. 18 (Wednesday)
- Machias — Washington County Normal School
1:30 p.m.: Oct. 14
- Presque Isle — Northern Maine Sanatorium
9:00 a.m. and 12:30 p.m.; Nov. 4
- Houlton — Aroostook General Hospital
9:00 a.m.: Nov. 3
- Bangor — Eastern Maine General Hospital
1:00 p.m.: Nov. 19 (Several will be two sessions)
- Augusta — Augusta General Hospital
1:00 p.m.: Dec. 17

CARDIAC CLINICS

- Portland — Maine Medical Center
9:00 a.m.: Every Friday (Holidays excepted)
- Bangor — Eastern Maine General Hospital
9:00 a.m.: Oct. 9, 23, Nov. 13, 20, Dec. 11, 18

CLEFT PALATE EVALUATION CLINICS

- Portland — Maine Medical Center
10:00 a.m.: Nov. 10

PEDIATRIC CLINICS

- Bangor — Eastern Maine General Hospital
1:30 p.m.: Oct. 23, Nov. 20, Dec. 18
- Fort Kent — Peoples Benevolent Hospital
10:00 a.m.: Nov. 18
- Waterville — Thayer Hospital
1:30 p.m.: Oct. 6, Nov. 3, Dec. 1

CLINICS FOR MENTALLY RETARDED PRE-SCHOOL CHILDREN

- Waterville — Thayer Hospital
9:00 a.m.: October 7, 21, Nov. 4, 18, Dec. 2, 16

ADOLESCENT CLINICS

- Portland — Maine Medical Center
1:00 p.m.: Oct. 28, Nov. 25, Dec. 23

American Academy Of General Practice State Of Maine Chapter

The ninth annual meeting and scientific session of the State of Maine Chapter, American Academy of General Practice will be held on Saturday, October 3, 1959 at The Armory, Lewiston, Maine. There will be a scientific program, a business meeting including the election of officers and the annual banquet for members, guests and their wives. Fount Richardson, M.D., President of the American Academy of General Practice will be the after-dinner speaker.



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GP 14:86, Nov., 1956.

Physicians Licensed to Practice Medicine and Surgery in the State of Maine July, 1959

Through Examination

Louis Anthony Ciampi, M.D., 9 Gay Street, Portland, Maine.
Edmund A. Dowling, M.D., 1919 7th Avenue, South Birmingham, Alabama
Stanley H. Boulas, M.D., 105 Charles Drive, Apt. D-2, Bryn Mawr, Pa.
Richard Vernon Worrell, M.D., 4055 Aspen St., Philadelphia 4, Pa.

Through Reciprocity

Russell Montague Lane, M.D., P.O. Box No. 284, Blue Hill, Maine
Hans Joachim Burhenne, M.D., c/o Dr. W. Herbert, Ellsworth, Maine
Ronald Sargent Potts, M.D., 10 Ware St., Lewiston, Maine
Donald Peter Dallas, M.D., North Haven Island, Maine
Walter Richard Peterlein, Jr., M.D., Springvale, Maine
Kirk Kenneth Barnes, M.D., Brunswick, Maine
John B. Leith Hartman, M.D., Patten, Maine
Howard P. Serrell, M.D., 49 Lalu Ave., Greenwich, Conn.
Desmond Bancroft Deville, M.D., Hartford Hospital, Hartford, Conn.
Bradley Earl Brownlaw, M.D., Blue Hill, Maine
Morton S. Berk, M.D., 21 McKinley Road, Falmouth Fore-side, Maine
Gerald Klein, M.D., 2019 R. Street, N.W., Washington 9, D.C.
Miriam J. Hasmer, M.D., Limington, Maine
Douglass C. Pennoyer, M.D., 112 Vaughan St., Portland, Maine
Doris Stewart Pennoyer, M.D., 112 Vaughan St., Portland, Maine
Charles Stuart Turville, M.D., 4700 Cedar Lane, Drexel Hill, Pa.

James P. Gaston, M.D., Vinalhaven, Maine
Francesco Cannestra, M.D., 305 Bacon St., Waltham, Mass.
William James Bunsey, M.D., 4123 N. 21st St., Phoenix, Arizona

American Board of Obstetrics and Gynecology

The next scheduled examination (Part 1), written, and review of case histories for all candidates will be held in various cities of the United States, Canada and military centers outside the Continental United States, on Friday, January 15, 1960. Candidates must submit case reports to the office of the Secretary within thirty days of being notified of their eligibility to Part 1. Current bulletins may be obtained by writing to Robert L. Faulkner, M.D., Executive Secretary and Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

The Providence Surgical Society Prize Essay

The Providence Surgical Society announces a Prize Essay Award of \$300.00 offered for the best dissertation on: "The Diagnosis and Management of Acute Small Bowel Obstruction." Any surgical house officer in a New England hospital is eligible to compete for this award. The essay will be judged on the basis of its content, originality and style. Each competitor for the prize is expected to conform with the following regulations: to forward to the Chairman of the Prize Essay Committee, on or before February 1, 1960, free of all expense, a copy of his essay; the manuscript will not show the author's name but is to be identified by a motto, accompanying the essay, each competitor will also send a

The Seventeenth Annual NEW ENGLAND POSTGRADUATE ASSEMBLY

NOVEMBER 3-4-5, 1959

Statler Hilton, Boston, Mass.

PRACTICAL COURSES FOR PRACTICING PHYSICIANS

Hospital Clinics in Boston Hospitals
Panel Discussions
Luncheon Symposia
Clinicopathological Conferences
Lectures
Medical Films
Exhibits
Ladies' Program
Entertainment

Open to all physicians. Registration fee: \$10. For further information write: Dr. Joseph R. Frothingham, Chairman, New England Postgraduate Assembly, 22 The Fenway, Boston 15, Massachusetts.

The Assembly is sponsored by the Massachusetts Medical Society in cooperation with the State Medical Societies and State Chapters of the American Academy of General Practice of Maine, New Hampshire, Rhode Island and Massachusetts.



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sealed envelope bearing a similar motto outside with his name and address within. The successful essayist will agree to relinquish all rights and title to his paper. Unsuccessful essays will be returned to the authors. The essay must be typewritten double-spaced on standard typewriter paper and should not exceed 10,000 words. Address essays to J. Murray Beardsley, M.D., Rhode Island Hospital, Providence 2, Rhode Island.

New York Diabetes Association

"Changing Basic and Clinical Concepts of Diabetes Mellitus" will be the subject of the Seventh All-Day Symposium sponsored by the Clinical Society of the New York Diabetes Association, Inc., to be held Friday, October 16, 1959, at Hunter College Playhouse Auditorium, New York, New York. The day's program will attempt an integration of recent advances in basic sciences with clinical concepts of diabetes.

Dr. Martin G. Goldner, Chairman of the Society, has extended a cordial invitation to physicians, medical students and other members of the profession to attend. There is no attendance fee but advance registration is required for admittance. Write to the New York Diabetes Association, Inc., 104 East 40th Street, New York 16, N. Y.

Tenth Annual Civil Defense Conference

The 10th annual County Medical Societies Civil Defense Conference will be held in Chicago, November 7 and 8, 1959

at the Morrison Hotel. The purpose of the conference, which is sponsored by the American Medical Association's Council on National Defense, is to inform and assist medical and health personnel for their roles in the event of a disaster. The featured speaker will be Congressman Melvin Price (D., Ill.), who is a ranking member of the Joint Congressional Committee on Atomic Energy. He will report on recent findings on the environmental and biological effects of nuclear warfare.

Additional information regarding the conference can be obtained by writing Mr. Frank W. Barton, Secretary, Council on National Defense, American Medical Association, 535 N. Dearborn, Chicago 10, Illinois.

"In an adult weighing 60 Kg. as much as two litres of citrated blood can safely be given in 20 minutes provided that liver function is not impaired. If more than this has to be given, it would seem wise to inject calcium; a conservative dosage would be 10 ml. of 10 per cent calcium gluconate for every litre of citrated blood." P. L. Mollison, *Blood Transfusion in Clinical Medicine*, Second Edition, page 422.

"Bunker et al. (1955) found that in patients with citric acid intoxication it was difficult to predict the appropriate dose of calcium; they recommended that if transfusions had to be given to patients likely to develop this syndrome, that is to say patients with liver disease or with mechanical obstruction to the hepatic circulation, packed cells rather than whole citrated blood should be used." Loc. Cit., page 422. Selected by Andrew M. Babey, M.D., Las Cruces, New Mexico.

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Current Concepts In Vascular Surgery

III. Arterial Occlusive Diseases Of The Lower Extremities

ELIE D. ABOULAFIA, M.D.* and ALLAN D. CALLOW, M.D.**

INTRODUCTION

The wide-spread attention that vascular surgery has received in recent years has been largely due to its potential applications in occlusive arterial disease. In many instances, direct arterial surgery may lead to improvement of the circulation in the limbs to a degree unattainable by other therapeutic means. Since at present there is an increasing need for, and interest in, the application of reconstructive arterial procedures, we shall discuss here some of the highlights of this rapidly expanding and changing field.

For many patients, the recent advances made in arterial surgery, may be translated into relief of symptoms or salvage of limbs. It is paramount to select the patients carefully for angioplastic procedures if good results are to be expected. Individual preferences for various techniques or particular types of grafts exist among vascular surgeons and will probably continue to exist until more experience becomes available. We shall not indulge here in the statistical analysis of the results obtained with various operative procedures. By so doing, we do not intend to minimize the importance of surgical technique or the merits of dif-

ferent forms of reconstructive arterial surgery, for we recognize their values. However, we wish to point out that prime consideration is to be given to the recognition of the patient who is most likely to benefit from any form of arterial surgery as well as the patient for whom such procedures are not to be recommended. We hope that the following discussion will help clarify some aspects of operative management of patients with arterial occlusive processes.

It is well to separate patients with arterial obliterative processes into two categories, for the considerations involved in their management may differ:

- a. Patients with acute arterial occlusions, and
- b. Patients with chronic or progressive arterial occlusions (including patients with marked narrowing of the arterial lumen without complete occlusion).

ACUTE ARTERIAL OCCLUSIONS

Acute arterial occlusions are usually due to thrombosis in a previously diseased vessel, emboli or trauma. Rarely acute occlusions may be related to an inflammatory process or essential thrombophilia⁵². The occurrence of an acute occlusion of a major arterial trunk is accompanied by well recognized signs and symptoms of sudden onset of ischemia in the region dependent for its blood supply upon the involved artery. In the lower extremities, such an occlusion unless promptly relieved results frequently in rapid onset of gangrene. Sudden interruption of blood flow through a main arterial channel constitutes, therefore, a surgical emer-

*Research Fellow in Surgery, Tufts University School of Medicine. Research Fellow in Surgery, New England Center Hospital. Supported in part by the "Worcester North Chapter Fellowship for Research in Vascular Surgery at the New England Center Hospital" — a chapter of the Massachusetts Heart Association.

**Associate Professor of Surgery, Tufts University School of Medicine. Surgeon, New England Center Hospital.

gency. Restoration of blood flow to the periphery within a few hours is followed usually by reestablishment of adequate circulation and viability of the extremity can be expected. Intraluminal obstruction resulting from the presence of a thrombus or an embolus should be relieved rapidly by arteriotomy and removal of the clot. Should a diseased arterial segment be encountered at the site of obstruction, it may be necessary to proceed with immediate reconstruction of the involved segment of the artery. Surgical intervention must be preceded by adequate supportive care⁵³. The earlier surgical management is begun the greater the chance for smooth and complete recovery. Embolectomy should be accompanied by search and institution of therapy for the pathologic process responsible for the dislodged thrombus so as to lessen the possibility of recurrent emboli. Thus, auricular fibrillation, mitral stenosis, subacute bacterial endocarditis or other similar conditions should receive prompt attention. The adjunctive use of anticoagulants is desirable after thrombectomy or embolectomy but should be judged on the merits of the individual case.

When signs of deficient arterial circulation appear following trauma, it is important to ascertain whether one is faced with an intraluminal occlusion, arterial tear or extrinsic compression. Treatment varies in accordance with the causative mechanism. At times such a differentiation is very difficult to make on clinical grounds alone, and arteriography or surgical exploration may be indicated. Traumatic intraluminal obstructions are most commonly due to intimal injuries with subsequent thrombosis or to separation of the intima from the remainder of the vessel wall with resulting intimal crimping and obstruction of the lumen. It is well to remember that even what may appear as "minor trauma" may result in thrombosis of a previously diseased vessel. In either case, excision of the involved segment with end-to-end anastomosis is the procedure of choice. If the defect created is too large to permit the direct approximation of the divided ends the use of a vascular graft becomes necessary. In cases where the interruption of blood flow is occasioned by extrinsic pressure such as edema, hematoma or an unreduced fracture, treatment should be directed at the primary offending factor.

CHRONIC ARTERIAL OCCLUSIONS

Chronic occlusive arterial diseases of the lower extremities are predominantly the manifestation of arteriosclerosis obliterans and for practical considerations we shall limit our discussion to arteriosclerosis. This degenerative disease of arteries can manifest itself in any artery in the body and can involve any combination of arteries. In spite of extensive research, many of the factors responsible for producing the lesions of arteriosclerosis remain unrecognized and little practical knowledge has been gained towards prevention of the disease or halting its progress. Many factors are recognized as

contributing to the ultimate appearance of the atheromatous lesions, yet the relationship between them is still quite vague. Hereditary traits, diet and hormones are but a few of the better known etiologic agents which influence the appearance of atheromatous plaques, intimal proliferation or ulceration and subsequent thrombus formation. In addition to the recognition usually given to general factors, there is evidence to suggest the importance of local conditions some of which may be hemodynamic in nature⁵⁴. Arteriosclerosis has a striking predilection for segmental distribution in a large percentage of cases. In the lower extremities, the lesions are often confined to short segments of the arterial tree, occurring mostly in the vicinity of major bifurcations. Narrowing of the lumen may persist for a long time and produce varying degrees of symptomatology even without ever becoming completely occluded. Furthermore, segmental involvement of an artery may remain stationary or progress rapidly without clinical evidence of arteriosclerosis elsewhere in the body. The benefits of successful arterial reconstruction in such cases of segmental disease are obvious.

Unfortunately, not all patients with segmental obliterative process of a major artery supplying the lower extremity are free from manifestations of a more generalized disease pattern. The presence of concomitant severe cerebral, coronary or renal arteriosclerosis often renders localized surgery in the extremity superfluous or even dangerous. It should be remembered that most patients with arteriosclerosis obliterans of the lower extremities are in no immediate danger to their lives. In most cases, unless gangrene is already present, it is hard to predict whether a particular case would progress to loss of limb or portion of it. We must therefore consider the advisability of reconstructive arterial surgery in the light of *rehabilitation to a gainful occupation* or of *symptomatic therapy*. We would like to emphasize this statement by the following extreme examples. In evaluating an old man who leads a retired life whose sole complaint is that of intermittent claudication upon walking several blocks, the patient's interests will probably be best served by non-operative management. By way of comparison, we shall recommend submitting to an angioplastic procedure a middleaged farmer with definite evidence of segmental occlusion in his femoral artery even though his symptoms are similar to those of the first case. It is often an economic necessity to relieve the younger and more active person from symptoms that may cripple his ability to work or walk. Surgical intervention for relief of pain at best is rarely successful. Such cases often manifest severe and diffuse involvement of the smaller arteries in addition to the obstructed major channel. Under such circumstances, the results of operative interventions are frequently much less satisfactory than when the disease process is limited to a segment of a major artery. Yet, at times, even slight improvement in the circulatory status of the limb may result in relief of

symptoms. In an occasional patient it may be reasonable to attempt operative intervention, in spite of the high probability of failure, instead of a priori condemning the patient to narcotic addiction or amputation. In the presence of gangrene or severe inflammation it is best to defer all arterial surgery.

The occurrence of arteriosclerosis obliterans in diabetic patients does not alter what we have said above. Although complications of limb ischemia are more frequent in diabetic patients, the actual indications for reconstructive arterial surgery are essentially the same as for non-diabetics.

ARTERIAL RECONSTRUCTIVE PROCEDURES

The application of various forms of arterial reconstruction is possible in, and should be reserved for, cases of definite segmental involvement. Local reconstructive surgery of an arterial segment is of little or no value where there exists extensive involvement proximally or distally. It has been established that a reconstructed segment will frequently become occluded in cases where there existed a poor peripheral runoff prior to operation. Arteriography plays an important role in evaluating the patency of the circulation above and below a point of obstruction.

The contraindications to the use of arterial grafts because of prevailing local conditions have been summarized recently⁵⁵. We can extend these contraindications to cover other forms of reconstructive arterial surgery as may be applied to the management of arteriosclerosis obliterans:

1. Poor blood flow from the proximal artery.
2. Inadequate distal vessels to carry away the blood to be supplied by the reconstructed segment.
3. Proximal or distal blood vessels of such friable nature as to be technically impossible to use for anastomosis or suturing.
4. Open, gangrenous or inflammatory lesion of the extremity.

Various operative procedures have been described for dealing with occluded arterial segments in attempting to reestablish adequate blood flow to the periphery. These procedures have each and all their advantages and shortcomings. Long term experience and more standardized criteria for evaluating both indications and results will eventually establish the superiority of a single operation or the specific indications for use of current or new techniques. In a field of medicine where up to a few years ago there was but little to offer, it is gratifying to observe an increasing number of good results.

Excision and graft replacement:

Excision of a diseased arterial segment and its replacement by graft is currently used less frequently than it was a few years ago in treating arteriosclerosis obliterans of the lower extremities. The reason for it is that when reconstructive arterial surgery is carried out in this fashion, blood flow to the periphery is made too

dependent on the grafted segment as many collaterals are sacrificed in the course of the procedure. In some instances where the graft failed to function properly the limb was left in a poorer circulatory condition than it had been prior to surgery. It is possible that certain amputations following excision and grafting might have been obviated if the circulation was not made to depend solely on the graft. For this reason excision of the diseased segment has been largely replaced by the by-pass graft⁵⁶.

The bypass graft:

Kunlin was the first to describe the insertion of a bypass in 1951⁵⁷. The diseased arterial segment is not removed but instead a graft is inserted in a fashion so as to establish a connecting channel between the arterial trunk above and below the segmental obstruction by means of a permanent shunt. This procedure is currently in use to bypass diseased segments of the aortic bifurcation, iliac, femoral and popliteal arteries. Most surgeons who have had experience with this technique of graft insertion are reporting better immediate and long term results than they did with excision and graft replacement^{58,59,60}. The reasons advanced to explain this increased success rate are still largely speculative and require further elucidation.

Thrombendarterectomy:

Thrombendarterectomy was first introduced by dos Santos⁶¹. This procedure consists of the dissection and removal of the diseased intima with the thrombus which may be attached to it. The media and adventitia are left behind, intact, to function as a reconstructed conduit. In examining autopsy specimens of arteries with advanced arteriosclerosis obliterans, one can find a cleavage plane and separate the diseased intima from the remainder of the arterial wall. In patients, however, the procedure can be quite difficult to perform in a satisfactory manner. Some surgeons have reported consistently poor results with thrombendarterectomy^{62,63}, while others have had considerable degree of success^{64,65,66}. As pointed out by Bazy⁶⁷, success following thrombendarterectomy depends upon the total removal of all diseased segments of intima. Unless this can be adequately carried out, one of the other mentioned angioplastic procedures should be depended upon. Anti-coagulants should be administered during and after thrombendarterectomy since the denuded and rough internal surface of the artery is susceptible to thrombosis. Special intraluminal strippers have been devised to facilitate the performance of the procedure through small arteriotomy incisions, doing away with long incisions and their added risk⁶⁸. Embolic phenomena due to dislodged sclerotic plaques following thrombendarterectomy as well as late aneurysmal dilatations have been reported.

SYMPATHECTOMY

The surgical interruption of sympathetic nervous routes at their lumbar ganglionic chain is performed

much less often since the introduction of more direct methods in the treatment of peripheral arterial occlusive disease. It still retains its value in treatment of vasospastic phenomena such as encountered in Raynaud's disease or in association with some cases of arteriosclerosis obliterans. It is to be said that sympathectomy has been quite misused when it was indiscriminately applied to many patients who had advanced arteriosclerosis obliterans. Robb and his associates⁶⁹ reported that in their experience sympathectomy did not improve symptoms in the majority of their patients with intermittent claudication and that in many instances exercise tolerance was actually reduced. Other investigators' experience has been quite different^{70,71} claiming that sympathectomy has frequently allowed them to perform amputations at lower levels than might have been necessary otherwise. It is commonly accepted that sympathectomy may improve the circulation where there is a vasospastic component, but that it does not save from amputation an arteriosclerotic ischemic limb where such a decision is deemed necessary otherwise, nor that it influences considerably the choice of level of amputation⁷². We feel that in many instances sympathectomy can offer definite benefits where a vasospastic element is superimposed upon early arteriosclerosis of a main vessel to an extremity and where reconstructive procedures are contraindicated for one reason or another. At times sympathectomy is recommended as adjunctive to reconstructive arterial surgery or in conjunction with amputations as it frequently improves circulation to the skin and may prevent local skin necrosis of the stump. Trophic ulcers of the skin are also influenced favorably by sympathectomy.

AORTOGRAPHY AND ARTERIOGRAPHY

The introduction of arteriography by Brooks in 1923 and of aortography by dos Santos⁷³ in 1929 have been responsible to a great extent for improving the means of diagnosis and treatment of arterial diseases in general and of arteriosclerosis obliterans of the lower extremities in particular. Unfortunately, like many other diagnostic procedures, aortography (by the translumbar route) and arteriography have been both abused and misused. Many reports have appeared in recent years describing various complications including several deaths. In retrospect it can be said that some of the reported complications and mishaps were the result of a non-discriminating approach and could have been avoided. Among the complications of translumbar aortography are the following⁷⁴⁻⁸¹:

1. Allergic reactions due to sensitivity to the radio-opaque contrast media or to the anaesthetic agent used. Such allergic reactions may vary in severity from slight elevations of the temperature to sudden death.
2. Paraplegia, transient or permanent.
3. Renal complications due to chemical tubular necrosis leading in some instances to severe renal

failure. In a series of 500 consecutive translumbar aortographies presented by Wylie and Goldman, the incidence of renal complications alone was 8% where the dye was injected above the renal arteries, and 2% where the injection was made below them⁸⁰.

4. Massive hemorrhage from the site of puncture, severe enough to cause shock, seems to be a particular hazard in hypertensive patients⁷⁴.
5. Loosening of sclerotic plaques with embolization.
6. Late mural necrosis with dissection or aneurysm formation following intramural injection of the dye.
7. Hemothorax.
8. Severe pain in the back, in the abdomen or in the legs.
9. Marked hypotension resulting in myocardial infarction or cerebrovascular accident.
10. Visceral bleeding (melena or hematuria) at times associated with the occurrence of mesenteric occlusion.

Because of the high incidence of complications directly attributable to translumbar aortography, some surgeons have abandoned the procedure or have even condemned its use^{79,81}. It is noteworthy that in some series, complications run higher than 10% while in others the incidence is much lower. It is our feeling that translumbar aortography is a valuable diagnostic procedure when properly administered and wisely used. We firmly concur with Shumacker who advises to refrain from aortography where the information to be gained can be secured by potentially less harmful means or where the information gained cannot materially aid in the application of treatment⁸². The potential dangers and expense to the patient definitely contraindicate the use of diagnostic procedures performed solely for "academic interest" when such procedures carry a morbidity rate of significance.

The greatest advantage of dye visualization of the arterial system resides in the information it can give regarding the status of the collateral circulation and the degree of involvement of the circulatory bed proximal and distal to the site of obstruction. As we have previously seen, such information is paramount in evaluating the patient as a candidate for surgery. It therefore emerges that the risk of the diagnostic procedure should be weighed against that of an exploratory operation during which the patient might be labeled 'not eligible for reconstructive arterial surgery'. As it is, even when aortographic studies are performed prior to surgery, the findings at the operating table are frequently those of more severe involvement than actually suspected from aortography. Foster and Killen⁷⁷ found that only 70% of aortograms were diagnostic of the actual operative findings.

We wish to reiterate that translumbar aortography should not be performed in the presence of a suspected abdominal aortic aneurysm. The risk to the patient

under these circumstances seems to outweigh the value of the information that the procedure may yield. Bernstein and his associates⁵⁴ have recently described a new technique for visualization of the abdominal aorta by intravenous injection of dye into an antecubital vein by way of a previously inserted catheter. This method eliminates most of the drawbacks of the translumbar approach and holds a great deal of promise as an important diagnostic tool in diseases of the abdominal aorta and its major branches.

Complications due to arteriography are quite rare⁵⁵ and are mostly due to extravasation of dye or blood. Such occurrences are rather infrequent even when the dye is injected percutaneously ('blind technique'). Naturally, necessary precautions should be taken to determine sensitivity to the dye or to the local anaesthetic.

Peroperative angiography has, no doubt, much greater potentialities than is commonly realized. It can be used for assessing the extent of the disease, help elect the procedure of choice or evaluate the efficiency of the reconstructive procedure while the patient is still on the operating table. There is no doubt that increasing realization of the value of peroperative angiograms will help improve the results of arterial surgery. It may be wise to test all patients scheduled for angioplastic surgery for sensitivity to the radio-opaque dye in anticipation of the possibility of having to perform peroperative arteriography.

NON-OPERATIVE MANAGEMENT

Although excellent results have been achieved in many instances of occlusive arterial disease by application of reconstructive procedures, one must not lose sight of the fact that many patients with arterial disease of the lower extremities will not reach the operating table. Whatever the reason contraindicating surgery, wise conservative management will result in a decreased amputation rate, improvement of symptoms or adjustment of the patient to them. We shall not discuss in detail what constitutes good non-operative management for this is beyond the scope of our presentation and the treatment was recently outlined by one of us⁵³. We do wish, however, to draw attention to some often discussed facets of the subject.

The use of *vasodilator drugs* although of some importance in controlling pure vasospastic conditions, seems less effective in arteriosclerosis obliterans of the aged. It is believed that some patients classified as having thromboangiitis obliterans (Buerger's disease) may be helped by vasodilator drugs⁵⁵. On the other hand, in patients with advanced peripheral arteriosclerosis obliterans, vasodilator drugs may actually decrease rather than increase blood flow to the extremities⁵⁶. Since the effects of vasodilator drugs may not be apparent for four to six weeks, it is important to observe the patient carefully during this period and to continue the drug only if adverse effects are not noted.

Proper *foot care* is probably the single most impor-

tant factor of non-operative management. Attention should be directed toward maintaining the feet warm, clean and free from any kind of local pressure. Complications must be aggressively treated as they arise, and all unnecessary minor procedures (paring of a callus for example) should be discouraged.

Smoking is frequently considered to have adverse effects upon the circulatory status of an ischemic limb. In a large series of patients studied by Silbert and Zazeela⁵⁷, it was concluded that the amputation rate in patients who never smoked was just as high as in patients who continued to smoke. The amputation rate was lower in smokers who stopped smoking. We feel that smoking should be discouraged in patients with obliterative arterial disease of the lower extremities, but if no improvement is obtained over a certain length of time, the patient may be permitted to resume smoking if he strongly desires to do so.

Whiskey and other alcoholic potions are of questionable value in improving the circulation in an ischemic limb. However, they may contribute to the well being of the patient and relieve the awareness of minor symptoms when administered in therapeutic doses of 1 or 2 oz. twice or thrice daily.

SUMMARY

Considerations in the operative management of occlusive arterial diseases of the lower extremities have been presented. Clinical aspects and a brief outline of our present surgical armamentarium have been evaluated as a guide for choosing potential candidates for reconstructive arterial surgery. The roles of sympathectomy, translumbar aortography, arteriography and non-operative management have been evaluated in the light of recent advances.

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GRADUATE MEDICAL TRAINING SHOWS GREAT INCREASE

A remarkable post World War II increase in graduate medical training programs for physicians is described in the 33rd annual report on graduate medical education in the United States, prepared by the American Medical Association's Council on Medical Education and Hospitals.

The report's figures showed over 37,000 physicians taking graduate training in 1958-1959. There has been a 50 per cent increase in available internships and a 500 per cent increase in residencies from 1941 to 1958.

The report, appearing in the October 10 A.M.A. Journal, attributed the marked expansion in the immediate postwar years to the desire of young physicians to secure specialty training after being discharged from military service.

Information in the report and an accompanying directory of approved internships and residencies help recent medical graduates plan further training and aids administrators concerned with broad aspects of graduate medical training.

Observations On Coronary Heart Disease*

PAUL D. WHITE, M.D.

Coronary heart disease is not only a major health hazard in the United States today but it is beginning to loom as one of the great problems in public health the world over and I would like to begin as well as end my talk with observations concerning the need of international research and cooperation in its control.

Some of you may know of the plans in Congress now to establish the new National Institute for International Medical Research. A bill sponsored by Senator Hill was before the Senate**. One of the chief opportunities of such an Institute will be to support research and training primarily in the study of the causes of heart disease and cancer.

Some of you also may know that Senator Humphrey went to Moscow primarily on a medical mission. In his conversation with Khrushchev he discussed plans for cooperation between the U.S.A. and the U.S.S.R. in the control of heart disease and cancer with possible plans for an International Medical Year in the future. This objective of Senator Humphreys was somewhat obscured in the news by the political aspect of the conversation but it seems quite likely that coronary heart disease will play a large role in future international medical cooperative activities both in research and otherwise.

Let me define coronary heart disease. There has been an unnecessarily confusing collection of terms applied to it. In the first place, it is not the same as coronary artery disease. One may have a considerable degree of atherosclerosis of the coronary arteries without any effect on the heart if there is a good collateral circulation. It is only when ischemia or necrosis of the heart muscle is involved that we speak of coronary heart disease. Ischemia due to coronary insufficiency causes angina pectoris and changes in the electrocardiogram, and if continued long will result in necrosis with infarction and scar formation. All these are part and parcel of the total effect of coronary atherosclerosis on the heart muscle and all of these results of ischemia fall under the general heading of coronary heart disease. There is no need of elaborate terminology. Incidentally, sudden death is almost always due to coronary atherosclerotic heart disease whether or not there have been any symptoms before. Old age *per se* does not

cause death. There is always a complication and the commonest one is coronary heart disease.

There was an extraordinarily slow evolution of our knowledge of coronary heart disease due in large part to the separation of pathologists and clinicians in former days. Theophilus Bonetus in 1700 described a case of coronary artery occlusion with rapid death but this was not followed up. Sixty-eight years went by before William Heberden described angina pectoris but even he didn't know the cause. It was Jenner who discovered the cause in the last quarter of the 18th century; but he didn't announce it until after the death of John Hunter, his friend, who had suffered from it for twenty years.

We, ourselves, here in New England were quite ignorant of the pathological findings in coronary heart disease until Professor Timothy Leary gave a demonstration one evening in Boston in the early 1920s to a number of us who had recently entered the clinical field of cardiology. In 1912 James Herrick of Chicago had, however, already put it together in an historic article.

Another factor retarding advance of our knowledge was the attitude toward specialization in the various branches of internal medicine in the early years of this century and even after 1925. Cardiology was not in those years a respected word. It took decades of research and teaching to establish the field of cardiology with the final joining of the pathologists and the clinicians in a happy union.

When some of us went to Moscow in 1956 and invited our Russian cardiovascular colleagues to join the International Society of Cardiology their answer was "but we have no cardiologists." This was much the same status as ours many years earlier. We simply said that we would be glad to have their experts in internal medicine particularly interested in cardiovascular disease join the International Society of Cardiology and this they agreed to do. As a matter of fact, at our Congress in Brussels last fall I learned that the Society of Cardiology of Communist China had just been established in 1958. Thus, gradually cardiology as a specialty is being recognized throughout the world.

Just a few words now about sudden death — a very intriguing subject. It has occurred and been noted all through history. There are accounts of sudden deaths in the Bible but with little specification. On the other hand, Pliny The Elder in the first century after Christ's birth recorded in his book on Natural History many cases by name, of Romans, mostly prominent and doubtless well-to-do, who died suddenly in Rome while carrying on their daily activities; for example, speech-

*Presented at a Symposium on Cardiac Diseases sponsored by the Maine Heart Association at Loring Air Force Base, Limestone, Maine, January 24, 1959.

**This bill was passed in the Senate and is now pending before the House Committee on Interstate and Foreign Commerce. There is no indication on final action at this time.

making in the Senate, the treatment of patients by doctors, business by men actively at work, and simple walking in the Forum. Of course, at that time there were no autopsies and although it was not so stated, it was suggested that this was the will of the gods. After Christianity came in, it was considered the will of God. Sometimes when I want a title for a paper on Coronary Heart Disease, I apply the label Heart Disease is Our Fault and Not God's Will.

During the centuries since Pliny, there have been several other epidemics of sudden death. In Rome, for example, in the cold weather of 1705-06, a good many prominent Romans died suddenly. The populace was very fearful of God's displeasure and suspected supernatural causes, but happily two scientific men, Pope Clement XI and his remarkable physician, Giovanni Maria Lancisi, arranged to have autopsies performed on a certain number of Romans who died suddenly that winter and in every case a natural cause for death was found consisting sometimes of ruptured blood vessels in the brain or thorax. Although there was no mention then of coronary thrombosis, that probably was the cause of a number of the deaths whether autopsied or not; it is probable that the coronary arteries were not examined. Lancisi wrote a book called *De Subitaneis Mortibus* or *On Sudden Death* in 1707 summarizing the problem and citing some of the cases that were autopsied. This book is not only historically of great interest but it should be helpful in increasing acceptance of postmortem examinations by the laymen. Bishop John Wright of Worcester, [later moved to Pittsburgh] and I have asked Professor Boursy of Holy Cross to translate this book into English and this is being done; we hope that the translation will be published in the course of the next year or two.

Not only do we need more wide acceptance of the value of postmortem examinations but we should actively instruct the public on the importance of their own knowledge of what diseases run in their families, for if there is a considerable amount of any one disease like diabetes or early coronary atherosclerosis or cancer in the family, the descendants are very possible candidates for such diseases. Not only may family health records aid families in future protection but discoveries that may be made at autopsy should also be very helpful. In other words, the people themselves should ask their doctors for autopsies which would be a much better custom than that of today when the doctors ask the families. There is no doubt at all about the influence of heredity in disease and that holds very true of coronary heart disease. Half the battle in the future will be that of identifying candidates for coronary heart disease while we are trying to determine what factors to control for their protection.

And now as to the symptoms of coronary heart disease. I have here two books, one not very old, published in 1809 in Edinburgh by Burns. It is entitled

Observations On Some of the Most Frequent and Important Diseases of the Heart Illustrated by Cases.

Some years ago I read an excellent explanation by Keefer and Resnick of their theory of the cause of angina pectoris. It fitted my own conception completely but I was surprised in reading Burns to find that he had already given the same explanation over a century earlier. On page 133 of that book he wrote as follows:-

"It has been long known that although the heart is always full of blood, yet it cannot appropriate to its own wants, that is to its myocardium, a single particle of the fluid in its cavities. On the contrary, like every other part, it has peculiar vessels set apart for its nourishment. In health, when we excite the muscular system to more energetic action than usual, we increase the circulation in every part so that to support this increased action the heart and every other part has its power augmented. If, however, we call into vigorous action a limb around which we have with a moderate degree of tightness applied a ligature we find that then the member can only support its action for a very short time. So now its supply of energy and its expenditure do not balance each other. Consequently soon from a deficiency of nervous influence and arterial blood it fails and sinks into a state of quiescence. A heart, the coronary vessels of which are cartilaginous or ossified is in nearly a similar condition. It can like the limb be girt with a moderately tight ligature, discharge its functions so long as its action is moderate and equal. Increase, however, the action of the whole body and along with the rest that of the heart, and you will soon see exemplified the truth of what has been said."

The other book is Volume 1 of the *New England Journal of Medicine* published in 1812, a few years after Burns. This Journal changed its name some fifteen years later to the *Boston Medical and Surgical Journal* but now, of course, the original name has been resumed. On page 1 of that Volume 1 of the *New England Journal of Medicine*, the first article is entitled Remarks on Angina Pectoris by John Warren, brother of Joseph Warren, who was killed at the battle of Bunker Hill and who helped to organize and establish the Harvard Medical School and the Massachusetts General Hospital. In this article he said that knowledge of this disease was getting abroad and that we must pay attention to it but he had no clear knowledge about its relationship to coronary atherosclerosis. He disputed somewhat the observations of the English writers such as Parry concerning that relationship. He thought that angina pectoris could occur without any heart disease at all. As a matter of fact, it took exactly another hundred years before James Herrick published his *Magnum Opus* on *The Clinical Manifestations of Coronary Thrombosis*. Even after Herrick there were some authors who believed that angina pec-

toris was due to other causes, for example, aortic disease or esophageal spasm.

My own experience in medical school and in the hospital even in 1920, despite James Herrick's paper, was complete ignorance about coronary thrombosis. We did know that there was angina pectoris but we didn't see many cases, doubtless in large part because there was no room for such patients in the wards of the hospitals of the country. There were two reasons for this. The first was that one had to be poor in order to enter the hospitals of the day and coronary heart disease was not common among the poor. The other reason was that the wards were full of cases of infectious diseases such as typhoid fever, pneumonia, and dysentery. Various factors such as these resulted in the general viewpoint that heart disease was not a very common or important condition and that it was too small a field in which to concentrate. However, it was quite evident to many of us, even in those early years, that specialization in research, teaching, and practice would be necessary to discover the magnitude of the problem and this has come to pass.

An extraordinary evolution in the last few decades has been the growing realization that atherosclerosis can be a serious disease of more than the coronary arteries. The same process now is well recognized as affecting the aorta itself to produce such a condition as Leriche's syndrome of blocking of the circulation to the legs due to involvement of the distal portion of the aorta and of the common iliac arteries. This was not well recognized in this country until less than two decades ago. Much more recently it has also been shown that little strokes may be due to atherosclerosis with obstruction to the blood flow through the arteries in the neck supplying the brain, in particular the internal carotid arteries and the vertebrals. DeBakey of Houston, Texas has done a magnificent job in the surgical treatment of some of these cases by introducing bypasses in the form of dacron grafts or by endarterectomy.

Along with this new development concerning the cerebral circulation there has been the demonstration of the clinical applicability of the Goldblatt clamp in finding atherosclerotic obstruction in certain areas of one or both renal arteries. Poutasse has clearly demonstrated this syndrome as responsible for some of the hypertension of today and he has corrected the hypertension in some cases surgically.

There is little that needs to be said about the diagnosis, prognosis, and treatment of coronary heart disease because in the main our knowledge about these problems is now fairly cut and dried and can be obtained from almost any review article or textbook. However, I would like to make a few suggestions.

In the first place, a family history should be obtained in detail with special inquiry concerning not only clinical and autopsy evidence of severe atherosclerosis in

recent ancestors and relatives but also of diabetes and hypercholesterolemia, both of which strongly favor the occurrence of coronary heart disease. The symptom of angina pectoris is still the most important evidence. The electrocardiogram is supplementary and often confirmatory but on occasion it may be normal in the presence of serious coronary heart disease unless one carries out an exercise test which is usually unnecessary if one knows how to take a good history. However, the results of exercise tests must be viewed with great caution because I have seen serious cardiac neurosis produced by faulty interpretation of the electrocardiogram taken after the two-step test. We must remember that there are physiological effects on the electrocardiogram which may be very misleading with changes in the S-T segments and T waves due to such conditions as hyperventilation, excessive adrenal stimulation, and even tobacco. Personally, I find that a desirable exercise test is walking, which is usually the cause of angina pectoris in the average patient. If in doubt which is very infrequent, I walk with my patient testing the effect of changing the speed of the walk and stopping at once if there is any discomfort.

The evidence of ischemia is, of course, much more important than a slight defect in the electrocardiogram which is chronic, such as bundle branch block. In the absence of any other evidence than bundle branch block, one does not need to restrict the activity of the subject under study. An example of this is a patient who came to see me first when he was 100 years old with no complaints at all except for a little deafness. Examination showed no abnormalities except bundle branch block by electrocardiogram. This did not change during the next 7½ years of his life and he was quite active and well without any heart symptoms during that time. He finally died at the age of 107½ of pneumonia.

Nevertheless, the electrocardiogram can on a relatively few occasions demonstrate abnormality of the coronary circulation not revealed by symptoms. I have seen instances of deep inversion of the T waves in the precordial leads in apparently healthy men. This abnormality of the electrocardiogram may continue for a few weeks or a few months, rarely longer, and then may quickly clear due undoubtedly to the development of an adequate collateral circulation which in the same way may clear angina pectoris. As recently as the 1920's it was thought that if angina pectoris went away the diagnosis must have been wrong. Many of the favorable cases of angina pectoris were ruled out in prognostic analyses in those years. Also, it was thought that coronary thrombosis would allow at best only three years of life. Then we began to discover in the 1920s and 1930s that many patients with angina pectoris or coronary thrombosis recovered and survived far beyond their allotted span.

Two hundred cases of moderate or severe coronary

thrombosis were collected by Dr. Bland and myself in the 1920s and first reported in 1931. A ten-year follow-up report of these same 200 cases was published in 1941 and finally a 25-year follow-up in 1956. This careful analysis was the basis on which the President's favorable prognosis was presented during his convalescence and recovery. It was found that these 200 cases who had survived the first few days and weeks of their immediate attack could be divided into four groups of about 25 per cent each. The first group did not survive the first month, the second group survived the first month but developed myocardial weakness and failure with dyspnea. That group did not do well, very few surviving a very few years at most. The third group did much better but had angina pectoris, that is, coronary insufficiency due to myocardial ischemia after recovery from the acute infarction. Finally, the fourth group of 56 patients did well. They recovered from their acute attacks with no angina pectoris or dyspnea and very little cardiac enlargement; 83 per cent of these cases survived five years and 56 per cent survived ten years. It was to this group that the President belonged. Here was practical evidence of the value of "the long follow-up."

When I began to collect these 200 cases in the 1920s I paid little or no attention to patients with very mild symptoms of coronary heart disease. The first patient of all with coronary thrombosis whom I recognized in January 1921 was so sick that he died in ten days of pulmonary edema, but most of the patients did survive their immediate illness. On looking back a few years before 1921, I as well as many others recalled patients with coronary thrombosis whom we had labelled something else such as acute indigestion or gall bladder disease.

One other note should be made about prognosis and that is, that without any doubt, there will be a great improvement of the prognosis in the future because of the earlier diagnosis in many cases and the application of protective measures, particularly in the form of a low fat diet and of anticoagulants, both short and long term. Just how much improvement there will ever be from surgery is still doubtful. We may hope that the application of delicate surgical bypassing of points of block in the coronary circulation or endarterectomy which has already been initiated, may be helpful but these procedures are hazardous and not yet clinically acceptable. We must wait and see. Most of the operations such as that of internal mammary ligation have not proved to be helpful.

Rehabilitation on the other hand has now become common practice in the case of many patients with coronary heart disease. This was undoubtedly greatly aided by the President's own ability to resume his job. Most patients can be rehabilitated, at least to a certain extent. Few become permanent invalids. Future protection of these patients will come through the application of the very measures that we may eventually apply

in the prevention of coronary heart disease. We may not want to use long term anticoagulant therapy for protection in the case of those who have never had any evidence of myocardial ischemia or coronary thrombosis although it has been suggested that undoubted candidates for the disease might in middle age be so protected. It has been well demonstrated in various parts of the world, for example, by Moses Suzman in Johannesburg, that long term anticoagulants after a single episode can reduce markedly the mortality from coronary heart disease.

Now we come finally to the study of the causes of coronary heart disease by epidemiological research. I would add that we gave four reasons for visiting Moscow cardiologically two years ago, as I mentioned last evening in my lecture to the Air Force:- 1) to help reestablish medical relationships between our countries, 2) to discuss with our Russian colleagues rehabilitation which I have just mentioned, 3) to discuss with them the need of research into the causes of heart disease (they agreed entirely with this need in view of their own heavy load of victims of heart disease), and 4) to invite some of the Russian internists and cardiologists to visit and study with us in America. Both rehabilitation and epidemiological research were subjects of lively discussion in Moscow and have continued to interest our Russian friends as well as our own groups in this country.

No matter how well diagnosed and treated our atherosclerotic patients have been during the last decade or two, the mortality statistics have become very impressive. Cardiovascular diseases are responsible for well over half of all the deaths in the U.S.A. today and half of all these patients have had serious degrees of atherosclerosis. Hypertension, although an important disease too, is much less of a hazard. Atherosclerosis involving the coronary arteries is the chief offender. In 1956 of 1,500,000 deaths, over half had a cardiovascular cause and about half of the cardiovascular cases showed serious involvement of the coronary circulation which makes up about a quarter of the total deaths. Atherosclerosis involving the nervous system accounted for nearly 200,000 more. Other types of cardiovascular disease, rheumatic, congenital, syphilitic, and pulmonary were minor problems.

In this considerable struggle to reduce the mortality and the morbidity from heart diseases especially the atherosclerotic and hypertensive types, research is obviously necessary. In the first place, research must be concerned with the host, that is, the candidate for coronary heart disease and I have already discussed the role of heredity here. In addition to heredity, we must study race which does not appear at the moment to be very significant and sex which, of course, is highly important, the male being many times more vulnerable in youth and middle age to coronary atherosclerosis of high degree than the female. Age is, of course, of importance too but it is pathological age and not

chronological age. Many elderly men have only moderate degrees of coronary atherosclerosis, not enough to cause ischemia.

Finally we come to the environmental factors which must be altered in order in some way to protect the candidates for coronary heart disease who are especially males of mesomorphic build with a positive family history and a high serum cholesterol and who are, or course, exposed to our prosperous way of life. I have had the good fortune to have been involved in cardiovascular epidemiological researches on populations in different parts of the world with Professor Ancel Keys of the University of Minnesota and our colleagues from various countries as for example, only a year or so ago in Nicotera in the toe of Italy and in Castelli in Crete to investigate olive oil eating populations for comparison with populations of the same racial stock living in other parts of the world, especially the U.S.A.

The problems that we have studied include nutrition and diet in detail, biochemical tests, electrocardiograms, physical examination, somatotyping, family history, and physical activity of the individuals being studied and their habits in the use of tobacco and alcohol. To date the most revealing finding concerns that of diet. Wherever the diets have been low in calories but especially in fat there has been less coronary heart disease even in the same populations; for example, South Italians living in South Italy have a diet and blood much lower in fat content than Italians living in Boston, excluding the wealthy Neapolitans who have much coronary heart disease. The average population in Naples like the average population of Southern Italians in Boston when compared, showed a six-fold greater prevalence of coronary heart disease in Boston than in Naples. Much the same thing seems to be true of Southern Japanese living in Southern Japan compared to Southern Japanese living in Hawaii. However, diet is not the only item being studied.

It is important to investigate physical activity in the form of work and exercise and it is rather belatedly coming into the limelight, that is, so far as researches are concerned. We ourselves in a follow-up study of Harvard football players of a generation ago found that coronary heart disease was less common in those who continued vigorous physical exercise after graduation than in those who took very little physical exercise and who put on much too much weight. Diet enters in here probably more importantly than does exercise but

nevertheless vigorous exercise did not hurt these men, in fact they did a little better than those who did not continue exercise. Incidentally Clarence de Mar, the noted Marathon runner, who died of cancer at the age of 70, after competing in hundreds of Marathons for several decades, had relatively little coronary atherosclerosis and no coronary occlusion.

Then comes the factor of stress and strain, hard to measure but apparently common the world around and present in these populations in Southern Japan and Southern Italy as well as in Hawaii and Boston. However, there may be a physical basis here with relationship to hydrodynamic factors which conspires with biochemical changes to favor atherosclerosis in certain parts of the coronary circulation, the aorta, and other vessels. Thus it is possible that stress and strain may play something of a role but more in precipitating trouble in people who are already affected than in causing the disease.

The role of tobacco may be somewhat similar although not enough studies have been made to come to any definite conclusions about it. I have not found alcohol protective. I have seen too many relatively young men with serious coronary heart disease to believe that alcohol is in any way protective even though it was recommended in the treatment of angina pectoris for a hundred years before nitroglycerine, a much superior remedy, was introduced in 1870.

Equanimity may certainly be useful in the presence of coronary heart disease and perhaps in its protection but equanimity can be helped probably more by regular exercise than by drugs. The stoic philosophers in antiquity were those who walked the Stoas of the day, that is, the promenades. Evidently they thought they could think more clearly while walking than in a static state sitting or lying. The vigorous use of the legs certainly aids the circulation including that to the brain.

Finally, in conclusion I would add just a word of appreciation for the opportunity to present this paper and to acknowledge my good luck in having lived through these exciting times with the hope that I may survive long enough to see some results come in the way of protective measures against this epidemic scourge of today, namely coronary heart disease. It is quite likely that as Shakespeare said — Our remedies oft in ourselves do lie which we ascribe to Heaven.

264 Beacon Street, Boston, Massachusetts

Spontaneous Regression Of Carcinoma Of The Cervix

Report Of A Case

Captain PAUL E. BLACK, M.C., U.S.N.* and

ETHAN ALLAN BROWN, M.R.C.S., England; L.R.C.P., London**

In an editorial discussion of the "Spontaneous Regression of Malignant Disease," Everson and Cole¹ define the term as referring to a state in which there has been "partial or complete disappearance of a malignant tumor in the absence of all treatment or in the presence of therapy which is considered inadequate to exert a significant influence on the growth of neoplastic disease." As a result of their study of the medical literature of the last 60 years, they were able to collect 112 documented cases. For sixty-seven of these, tissue slides or photomicrographs were available for review. Of these, again, three only were proven to be carcinomata of the uterus^{2,3,4}. In their opinion, ours represents the fourth such case.

The patient, alive and well and aged 73, is all the more remarkable because she not only reacted anaphylactically to Diodrast®, but also, when told that there was no further need for the use of morphine, which she was then taking in doses totaling 16 grains each day, she of her own volition, immediately and completely ceased its use, thereafter suffering no symptoms of withdrawal. Publication of this Case Report has been delayed for ten years, in order that we might be certain that there had been no recurrence of any type of primary or secondary malignant disease, or narcotic addiction.

CASE REPORT

In 1946, at the age of 59, a widow suffered from an attack of "angina." For this, bed rest and limited "bathroom privileges" were prescribed.

On February 15, 1948, she was admitted to the Eastern Maine General Hospital at Bangor for diagnostic study and treatment of a blood-streaked vaginal discharge. This had been present daily for sixteen months following a vaginal hemorrhage which had lasted almost twenty-four hours. She had been at first reassured that she was suffering only from "drainage"

due to the menopause, which had become obvious during her fifty-fourth year. For three months, she had suffered from a moderate degree of pain in the general area of the lower right and also left abdominal quadrants. The pain was intensified during examination by rectum. One week before her admission to the Hospital, she had learned that she "had a tumor."

Her mother had died from natural causes at the age of 90, and her father from a cerebrovascular accident when 87 years of age. Of the ten siblings, two sisters and one brother were living and well. Four brothers had died of unknown causes, and three others of cardiac disorders associated with angina. There is no family history of malignant disease, or of acute or chronic disease suggestive of any epidemiological factors.

The patient herself had lived an uneventful life, excepting that during 1943 a "tumor" had been removed from the left arm. She had twice been pregnant, and had successfully given birth to two children, alive and well, and at the time of admission respectively aged 35 and 40 years. Excepting for "constipation," she presented no other complaints.

She said that she had suffered from the pain in the lower abdomen for at least two and one half years. At the time of the vaginal hemorrhage, no examination had been done. Only bed rest had been prescribed. But the bloody, watery discharge, although less, continued. It was, however, present in such quantity that with the patient standing, "a pool of it would form on the floor."

The report of the physical examination notes that she was "well developed and well nourished." The skin appeared "bronzed." In each eye there was a well-marked arcus senilis. There was no deviation from the normal in all other organs and systems subjected to complete routine examination. The blood pressure was 172/100.

The lower part of the abdomen was flat, rigid and tender. No masses were palpable. Following the rectal and vaginal examinations, the patient's physician described the cervix as "hard and rocklike." There were visible, following further vaginal examinations, friable,

*U. S. Naval Air Station, Brunswick, Maine.

**Director, Asthma Research Foundation, Boston, Massachusetts.

cauliflower-like tumors replacing and projecting from the circumference of the cervix. The cervical canal was sloughed out, and wide open. A green mass, continuous and presumably a part of the larger pelvic organs and tissues, the uterus, and its adnexa, filled the vaginal vault so that no normal tissue could be seen. All of the local organs were fixed in the state so aptly described as a "frozen uterus."

On February 16, 1948, and preceded by spinal anesthesia, a dilatation and curettage produced only more of the green, sloughing amorphous material. Samples of the "projections" were taken for biopsy and microscopic examination. On February 20, 1948, the patient was temporarily discharged from the hospital. Acetylsalicylic acid and Codeine were prescribed for the continuously present moderately severe pain.

The pathologist reported on the specimen sent him as follows:

"S-48-546. February 17, 1948. Gross Description: Specimen consists of two fragments of gristly, white tissue; the largest measuring 1.0 x 1.0 x 0.3 cms.

"Microscopic Description: 2 areas — 2 slides — paraffin. Sections of cervix reveal a hyperplasia of the surface epithelium beneath which there is a fairly diffuse infiltration of lymphocytes and occasional plasma cells. Deep in the stroma there is a fairly sharply outlined, but non-encapsulated tumor nodule composed of nests of epithelial cells separated by a loose, slightly basophilic stroma. Mitotic figures are found in the cells. There is a slight attempt at pearl formation. Diagnosis: Squamous cell carcinoma of cervix, Grade II."

The patient was re-admitted to the Eastern Maine General Hospital on March 3, 1948, and a second biopsy of the cervix was done. The second specimen was similarly reported.

"S-48-792. March 4, 1948. Gross Description: Specimen consists of four small flakes of grayish-white tissue, the largest measuring 0.2 x 0.3 cms.

"Microscopic Description: 4 areas — 2 slides — paraffin. Sections of cervix reveal numerous islands and columns of tumor cells dipping down from the epithelial surface. The tumor cells are quite well differentiated and form numerous epithelial pearls. The stroma is quite edematous and is infiltrated with lymphocytes and plasma cells and occasional polymorphonuclear cells. Diagnosis: Squamous cell carcinoma of cervix, Grade II."

Roentgenograms of the lumbo-sacral spine have been taken in order to exclude the presence of metastases. The report reads: "The lumbar spine shows good vertical alignment with moderate proliferative thickening about the vertebral borders. There is evidence of calcification about the abdominal aorta. There are no bony changes in the lumbo-sacral structures suggestive of metastatic invasion."

During the patient's third admission, March 3 to 25, 1948, the original diagnosis was reconfirmed, and

the patient was treated with x-ray, directed on alternate days to the anterior and posterior aspects of the pelvis. The report shows that the exposures consisted of 200 kilovolts filtered with 0.5 mm of Copper and 1.0 mm of Aluminum. The duration of each application is given as 10 minutes for a total of 230 Roentgen units, the total of 4140 units being divided equally between the anterior and posterior aspects for the eighteen days of treatment extending from March 5 to 25, 1948.

The patient was re-admitted on April 20, 1948. The diagnosis was re-confirmed. Additional treatment consisted of radium insertion, (3600 mgm hours) applied during her fifteen days of hospitalization ending May 5, 1948. The pain was described as becoming more severe. It was unbearable and could only be endured when morphine was administered by injections. The amounts needed for control of pain increased. Within a period of some months each single injection comprised two or more grains. The total amount used in any twenty-four hour period amounted to sixteen grains.

Following re-admission to the Hospital on March 29, 1949 (that is, one year later) the initial diagnosis of a squamous cell carcinoma of the cervix once more was re-confirmed.

A note was made of the obvious addiction to morphine. The report of roentgenograms of the lumbar spine then taken read: "The lumbar spine shows relatively good vertical alignment. There is quite a bit of proliferative arthritic change about the vertical borders and the lumbo-sacral area shows evidence of arthritic thickening. No changes in the bone densities are diagnostic of metastatic invasion. There is quite marked sclerosis of the abdominal vessels."

No treatment was given and the patient was discharged with the prescription of further bed rest and the use of additional morphine for the control of the obvious and by now intractable pain. For a period of eighteen months, the patient continued to complain of this same severe pain, limited to the suprapubic area and referred to the lower parts of the vertebral column. She suffered also from continuous and "unremitting constipation." The total amount of morphine administered during each twenty-four hour period was maintained at a level of sixteen grains.

When admitted to the Mount Desert Island Hospital on August 2, 1950, the patient appeared thin, pale, and apprehensive.

All the organs and systems examined were reported as normal, excepting for the tenderness of the suprapubic region, examination by palpation of which caused spasm.

Re-examination of the vaginal vault, however, proved it to have become smooth, and typically pink. The normal mucous membrane had been replaced by scar tissue which obliterated the cervix. There was no evidence of any erosion, or of any discharge, bloody or otherwise. By digital examination, the uterus could be

felt as small and fixed by fibrous bands. The Fallopian tubes and the ovaries could not be distinguished by palpation. The examination by rectum confirmed that done vaginally.

The roentgenograms of the chest, lumbar spine and colon were reported upon by the radiologist as follows: "There is no evidence of metastatic disease in the dorsal spine or of the thoracic cage. There is no evidence of metastatic disease in the pelvis or lumbar spine. Fluoroscopic and film examination of the colon fails to reveal any evidence of stricture or organic lesion. The intravenous urogram was not done because of a slight anaphylactic reaction which the patient experienced at the beginning of the administration of Diodrast."

The constipation was ameliorated by use of enemas given frequently over a period of eleven days. All were effective, and what is described as a "literally enormous amount of hard fecal material" was ejected.

A review of the history, and the gross and microscopic examination left no doubt that the initial and subsequent diagnoses had been correct. The treatment by radiation was certainly not enough to cause either an immediate or a delayed effect, especially since no changes had occurred for at least one year following both the application of radium and the exposure to x-ray.⁵ The only warranted conclusion was that the growth, previously present, had evidently undergone a spontaneous regression. But the problem of the undoubted morphine addiction needed solving.

For the first two days of hospitalization, the patient was given Pantopon® (gr. 1/3) on four occasions. She was, for one day, given injections of saline solution and the decision was then reached that she be told that there was no present evidence of the malignant growth. Of her own volition, she refused further analgesic medicine of any type. She suffered from no signs of withdrawal, although she went from the noted daily dose of 16 grains of morphine to none whatsoever during a period of four days.

She was subsequently re-admitted to the same Hospital for an appendectomy which she successfully weathered, although she delayed her hospitalization until her "skin literally turned green." During the next year, she suffered from gall bladder symptoms and at the time of the cholecystectomy, the abdominal cavity was explored. Excepting for adhesions, no abnormality was discovered.

At her present age of 73, she travels six miles daily by bicycle to work in a sardine factory where, "on piece work, she outstrips the younger women." She earns additional money by digging clams. She saws her own firewood, and although several years ago she gave up the drinking of beer, she continues to smoke two to three packages of cigarettes daily. Eleven years have elapsed since the original diagnosis had been established, and thirteen years have passed since the appearance of the first signs of any abnormality.

DISCUSSION

Did this patient's proven squamous cell carcinoma undergo a spontaneous regression? The actual number of patients afflicted with similar carcinomata of the cervix and given exactly the same type and amount of treatment with roentgen ray and radium is not known, but the number, although it cannot be ascertained, must be quite great. The cells of such malignant tumors may be temporarily and in part roentgen-sensitive. The rate of growth is sometimes retarded, although how much is not measurable. But growths of this nature do not usually or routinely completely vanish.

Should the patient afflicted so late in life survive despite the growth, then other causes of death usually shorten the period of observation, and there is always the possibility that the patient may have died because of other reasons, and before the disorders caused by the metastatic tumors had become apparent. But, this patient stayed alive and well for beyond the usual post-diagnostic and treatment period of ten years.

Everson and Cole (*op. cit.*) say, "The probability of spontaneous regression occurring in any single case of cancer is so extremely small that any patient would be most foolish to reject orthodox methods of treatment in the hope that his cancer would regress spontaneously."

But, in his discussion of the nature of tumor immunity, Barrett⁶ discusses Raffel's work on auto-immunization⁷ and says, "The fact that spontaneous tumors do regress in both animals and man will be disputed by few." He quotes Stewart's description of a patient whose widely disseminated carcinoma of the cervix appeared to be radio-resistant, but following a "systemic reaction of the allergic type," rapidly regressed. Later when a small lesion of the cervix was treated by radium, there was a second similar typical general allergic reaction⁸.

Emboli of carcinomatous cells, as we know, do not all become either anchored or metastatic. Is this due to lack of suitable tissue for attachment, or is it that the host's immunologic resistance to its own tumor may be variable or high? Stewart feels that on any immunological basis of this type, biological control may not be too many decades away.

The Symposium on the Origin of Resistance to Toxic Agents (*op. cit.*) gave equal emphasis to the phenomenon of tolerance and dependence on narcotics (N. B. Eddy and M. H. Seevers) as well to the nature of tissue immunity to tumors. The "internal milieu" of this patient not only (perhaps assisted by the treatment, although no effects were apparent for a year) took care of the tumor but enabled her to take large doses of morphine without signs of addiction.

Does our allergic patient possess the host-factor responsible for her ability to recover from both carcinogenesis and drug addiction? Is this conclusion truly buttressed by her known anaphylactic response to contrast media?

SUMMARY

Sixteen months following a vaginal hemorrhage in a (then) 61-year-old patient, a diagnosis of squamous cell carcinoma of the cervix, Grade II, was made, and confirmed by two separate biopsy and microscopic studies of the tissues removed. Standard treatment with eighteen x-ray exposures totaling 4140 Roentgen units, and 3600 mgm hours of radium were without effect as judged by re-examination one year later. At some time during the ensuing two years, however, there was a complete regression of the carcinoma. Subsequent roentgenograms and physical examinations, and as well, two explorations of the abdomen, during an appendectomy and a cholecystectomy proved neither primary nor secondary growths to be present. The patient reacted anaphylactically to the use of Diodrast.

Although the intractable pain originally present required for its amelioration daily doses as great as 16 grains of morphine sulfate, the patient, when informed that the original tumor was no longer present, imme-

diately, completely, and with no signs or symptoms of narcotic withdrawal, needed neither substitute analgesic drugs nor treatment.

During the subsequent ten years, no medicines, excepting those needed for each surgical procedure, have been administered or taken. It is suggested that there may be a mechanism common to tumor regression, narcotic tolerance, and some allergic phenomena. Recent studies concerned with the immunological aspects of malignant disease point to this area of exploration.

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Maine Medical Association

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Continued from September, 1959 issue—page 336

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The Journal of the Maine Medical Association

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Across The Desk

More Doctors Unneeded, Expert Says at Capitol

A noted medical economist suggests that increasing the supply of doctors is not the answer to America's health problems, even though AMA has reversed itself and now goes along with the fairly common assumption there is a shortage of physicians in the United States. Too much importance is attached to the ratio of MD's to population, Eli Ginzberg, of Columbia University, told the Congressional Joint Economic Committee Thursday at hearings on the rising costs of professional services.

"The simple equation that doctors equal health is a very foolish and incorrect equation," he said.

Witness Hints More Than He Says on MD Manpower

The Ginzberg testimony Thursday on Capitol Hill was provocative more for what it intimated than for what it said. True, the distinguished witness stated unequivocally that this country has enough physicians, in his belief, and construction of more medical schools is unnecessary. But if he feels the time has come for trained laymen to take over many of the duties now reserved for physicians and that medicine is taking altogether too much of the credit for longer life tables, Ginzberg was more implicit than explicit in conveying that view. Here are a few quotes:

"There is a question of whether you really ought to encourage the American public to use a lot of doctors."

The witness reminded that America's health was never better than in World War II, when 40 per cent of her practicing physicians were in uniform.

"I really was not arguing the fewer the doctors the better the health. But there comes to a point that health is not a function solely or primarily of doctors. The question of how much income the population has, how it eats, where it lives, what kind of education it has, how it learns to take care of itself — are all very important aspects of health."

"I would rather see some more money going into schools intelligently, for younger children, for people at the beginning of their productive life, than I would for indiscriminate increase in medical resources where I think the payoff will be much less."

Senator Prescott Bush (R., Conn.) and Representatives Richard Bolling (D., Mo.) and Henry S. Reuss (D., Wis.) expressed deep interest in the remarks of Dr. Ginzberg (Ph.D.), who has written and lectured extensively on costs of health services.

Iowa Legislators Guests of State Medical Society

The Iowa State Medical Society recently entertained the entire Iowa legislature at its annual meeting to demonstrate to the lawmakers the part organized medicine plays in the postgraduate education of physicians. Doctors were present to escort the legislators through the scientific exhibits and 250-bed emergency hospital, then on to a society-sponsored reception.

At the meeting, the physicians discovered that *this was the first brush the Lieutenant Governor and many of the legislators had ever had with organized medicine.* They had all visited individual physicians when they were ill but few had had any contact with the medical profession's scientific activities. Many who had thought the society was just a doctors' lobby were impressed by the role it plays in advancing medical progress.

Artificial Kidney Has Few Limitations

The artificial kidney can be used to treat just about anyone, whether he is very old, very young or very ill, the machine's inventor said today.

Dr. Willem J. Kolff and his associate, Dr. William A. Kelemen, Cleveland Clinic Foundation, said if the machine is skillfully used it carries little danger.

Their statement appears in the (Oct. 3) *Journal of the American Medical Association.*

The artificial kidney consists of a cellophane coil resting in a stainless steel tub containing a special solution. A plastic tube is connected to a leg artery and the blood is forced into one end of the cellophane coil. The blood flows through the coil and back into the body through a tube connected to a vein in the arm.

The machine duplicates the work of the kidneys, removing poisons and chemicals from the blood. It is used in uremia and other conditions in which the kidneys fail to work. It is also used when a person has been poisoned, since it can remove poisonous substances 20 times faster than the kidneys.

All major medical centers have the machines and a trained team of physicians to operate them.

The changes in blood volume produced by the use of the artificial kidneys can cause shock or abnormally rapid blood movement, the doctors said. These have been considered to be especially dangerous for the very young, the very old or the very ill. However, skillful use of the machine can prevent this, the doctors said.

The advantages and almost certainty of clinical improvement whenever uremia or fluid retention play a part in the illness far outweigh the alleged dangers of the machine, they said.

Don't Underestimate Child's Intelligence

Don't put three strikes against your child's mental ability until he — or she — has had a chance to go to bat, Willard Abraham, Ph.D., of the special education department, Arizona State University, cautions parents in the (October) *Today's Health*, an American Medical Association publication.

Dr. Abraham is disturbed by parents who believe a child is mentally retarded when he really is not.

"Few of us are objective about our own," writes Dr. Abraham. "We see them as we want them to be or as we fear they are, but seldom as they really are. We usually enjoy thinking they're bright (whether they are

or not), and that error may result in undue pressure, frustration and disappointment. But even more serious is the error of underestimating our child's intelligence, and not recognizing the importance of it."

Dr. Abraham devised a check list to aid parents who may be too close to their children to see them accurately.

"It is especially effective for those of kindergarten age or slightly older," he said, "and will help differentiate the youngsters who are among the less bright from those who seem to be retarded but actually might be near the top of the scale."

There's a caution sign attached to Dr. Abraham's check list statements: It's the idea that counts. The first part, taken by itself, may be a bit disturbing, so no conclusions should be drawn until the second part is read.

The question parents should ask is "Do both parts of the statement apply to my child?" For instance:

(1) He has a short attention span — doesn't stick to a task very long — but (2) he has many interests or hobbies as he jumps around mentally, hopping from one to another.

(1) His vocabulary often has a one-syllable limitation, but (2) once in a while he surprises you by accurately using words like practical, jet propulsion, historical and realistic.

(1) He seems to demand countless explanations of why he should brush his teeth, eat balanced meals and wash his hands before eating, but (2) you get the feeling he was pulling your leg all the time when you overhear him patiently explaining these important facts of life to his little brother or sister, using terms much more understandably than you did with him.

Dr. Abraham calculated one "yes" answer on the 10-point list should give you an inkling that you've been wrong about your child; two to four should provide "concrete assurance," and five or more "yeses" ought to have a parent smiling inwardly with a secret apology because his child is brighter than he thought.

Once the problem of supposed mental retardation is out of the way, Dr. Abraham urged parents to refrain from over-attentiveness as a child learns to stand on his own two feet.

Latest Attack on Organized Medicine

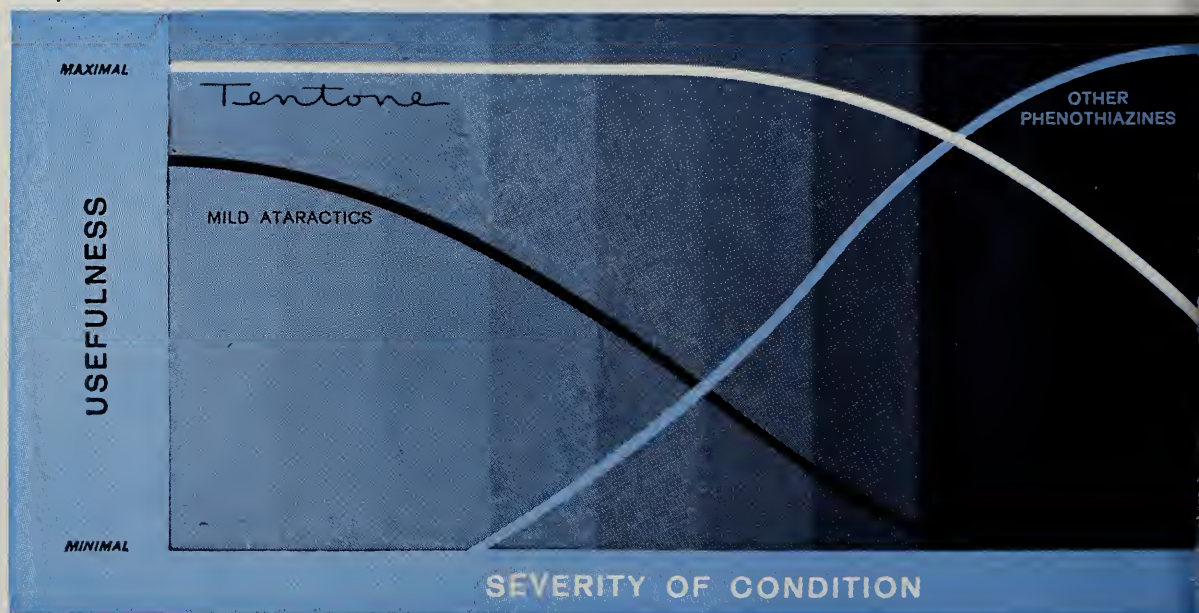
The latest attack on organized medicine by one of its severest critics in Congress, Senator Wayne Morse (D., Oreg.), came in the course of one of his frequent diatribes. Following are a few quotes from the Senate sponsor of the Forand bill:

"Let me say to the doctors of America, I am not worried about any danger of socialism in American medicine, but I will tell the doctors of America what I am worried about. I am worried about undue commercialization in American medicine."

"We must take away from the doctors of America the right to tax, which they now exercise. They exer-

new... highly effective tranquilize

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cise it under the guise that they think they should be allowed the right to impose certain fees upon those who they think are better able to pay higher fees, in order to take care of the medical cost to patients the doctors serve who cannot pay such fees."

"Although reactionary doctors will not approve, nevertheless I take the position . . . that the medical profession does not have the moral right to charge whatever fees it chooses to charge. On the contrary, the government has the duty to impose restrictions upon the medical profession similar to the restrictions we have imposed upon other economic groups whenever an economic group takes advantage of the people."

Editor's Note: Now, now, Senator, when was this 'moral right' conferred on you? Congress this year voted \$106 million more for medical research than was asked for by either President Eisenhower or Arthur S. Flemming, Secretary of HEW — and what's more "President Eisenhower and Secretary Flemming have made it clear that they don't feel bound to spend it."

One Dollar in Every Eight, In Surplus Property

One dollar in every eight, in surplus property distributed among the states in the second calendar quarter of 1959 by the Department of Health, Education and Welfare, went to institutions in New York State.

Public health, educational and civil defense organizations in New York received Federal surplus whose acquisition cost was \$16,065,000, out of a national total of \$130,034,578. The next highest state was California, \$10,005,087. Other leaders were Pennsylvania, \$7,507,606; Florida, \$6,789,904; Illinois, \$5,877,706; Massachusetts, \$5,164,538, and Texas, \$5,112,065.

The First Session of the 86th Congress Has Adjourned

The first session of the 86th Congress has adjourned but it is the second session, opening in January, that will witness the passage — or defeat — of legislation most affecting practitioners of the healing arts.

Other than the Federal employee health insurance program, enactments this year were hardly major in nature: . . . extension of existing programs to promote air pollution control and graduate training in public health . . . a bill dealing with sanitation on Indian reservations . . . a few veterans' measures liberalizing service-connection presumption in Hansen's disease and multiple sclerosis and authorizing medical care at government expense for veterans living abroad.

But 1960 will be the year of decision for the Keogh-Simpson Bill, of vital importance to every self-employed professional person interested in building up a retirement fund for himself . . . for the Forand bill, with its bold plan to bring medical and hospital care to the aging . . . for a bipartisan effort to place on this country's shoulders the mantle of world leadership and

responsibility in cooperative medical research . . . for a variety of proposals ranging from tax law amendments favoring the purchaser of medical services to outright subsidization of medical and dental schools.

Within the past few days, President Eisenhower signed into law bills which transfer the Army and Navy Hospital to the state of Arkansas and increase the authorized appropriations for the Gorgas Memorial Laboratory near the Panama Canal. This winter he will have to take a position on issues in the health field which are far more controversial, such as amending the Medicare Act so as to have its benefits include dental services and establishment of a special commission to conduct a study of health care and its costs to the American people.

As indicated above, the addition of medical care and hospitalization insurance to fringe benefits enjoyed by Federal workers is an important milestone. The enabling law passed by Congress and approved by the President provides the Civil Service Commission virtually with carte blanche authority for working out the important details involving, among other things, choice of carrier and fixing of rates.

Many months of conferences and negotiations lie ahead, in which Federal officials will seek agreements with employees' representatives, insurance companies, Blue Cross and Blue Shield spokesmen, officers of group practice and medical service organizations and other interested parties.

Way Paved for Exchanges in U. S. — Soviet Medicine

Nikita Khrushchev's physician paid a visit to the National Institutes of Health and discussed the exchange of medical scientists and students. Dr. A. M. Markov, head of Kremlin's medical service, met with Secretary of HEW Arthur S. Flemming, Surgeon General Leroy E. Burney and Dr. James Shannon, director of NIH. Out of their conversations is expected to come a greater interchange of clinical practitioners as well as bench researchers and administrators.

Bust Inflators and "Cancer Cure" Lights

Bust inflators and "cancer cure" lights are still in business, despite abatement efforts by the Food and Drug Administration. In the month of August the Federal agency seized a device, consisting of an electric air pump and plastic suction cups, marketed as a gadget to increase the size and firmness of the breasts. Also confiscated was an assemble-it-yourself kit for treating a variety of major and minor diseases, including cancer, by color lighting.

"Mechanical contrivances for increasing the size of women's breasts are a swindle and a potential hazard to health, and are considered illegal per se," said an FDA statement.

In court actions, August witnessed convictions of druggists in Houston, New York, Oklahoma City, Knoxville and elsewhere for selling and refilling prescriptions for tranquilizers, amphetamines and barbiturates without physicians' authorization.

Among other devices seized by FDA enforcement agents, there were vibrator pillows for weight reducing; a peculiar plastic-covered mat of pieces of china strung together which was supposed to lower blood pressure and "clear the brain"; and sundry dietary substances supposedly good for epilepsy, alcoholism, gallstones, et cetera.

Government Puts Libel on Another Vitamin Pill

The Department of Justice filed a libel in the U. S. District Court, Kansas City, for seizure and condemnation of 21 cases of "Insta-Pep," described as a misbranded vitamin-mineral supplement. Investigation by Food and Drug Administration agents preceded the legal action.

The government's complaint states that the consignment went to Katz Drug Company in North Kansas City from the Drug Research Corporation, New York City. False and misleading statements on display cartons, labeling of bottles and accompanying newspaper tear sheets are charged.

Among the challenged claims: . . . first new development in the vitamin field in more than 20 years . . . fights fatigue in 20 minutes . . . contains a "new, remarkable, amazing anti-fatigue factor" . . . superior to all other vitamin preparations because it contains "Dynamol" (shown by the government to be merely caffeine).

Total Medical Care Bill Runs \$23 Billion A Year

In the year ended June 30, 1958, it is estimated that total expenditures for health and medical care were about \$23 billion. Private outlay is figured at \$17,294,000,000 and public expenditures, \$5,443,700,000. Construction of medical and hospital facilities accounts for about \$1 billion of the total, the remainder having been expended for health services, drugs and medical research. These estimates are taken from a report by Mrs. Ida C. Merriam in the Social Security Bulletin for October.

"Since 1929, public expenditures have increased from 14 per cent to 24 per cent of total expenditures for health and medical care," says Mrs. Merriam, of the program research division in the Social Security Administration. "If expenditures for medical facilities construction, medical research and general public health activities and the expenses of operating prepayment plans or philanthropic agencies providing health services are omitted, the remaining health expenditures represent essentially expenditures for personal health care.

"Public funds accounted for 10 per cent of personal health care in 1928-29 and 21 per cent in 1957-58. Health insurance benefits, almost nonexistent in 1928-29, covered 18 per cent of personal health care by 1957-58. Direct payments by consumers met 57 per cent of such costs and industrial in-plant services and philanthropy about 4 per cent in the later year."

NIH Seeks Doctors' Help in Gynecologic Research

The Clinical Center of the National Institutes of Health has launched an investigation of the role of the adrenal gland in the Stein-Leventhal syndrome. This condition is marked by oligomenorrhea, hirsutism and polycystic ovaries.

"The cooperation of interested physicians in referring laparotomy-proven cases is invited," says an announcement. "Referral letters or phone calls will receive prompt attention and should include detailed medical information about the patient."

Physicians interested or desiring further information on referrals should communicate with Dr. J. F. Rall, Chief, Clinical Endocrinology Branch, National Institute of Arthritis and Metabolic Diseases, Bethesda 14, Maryland. (Telephone: OLiver 6-4000, ext. 4181).

Report Reveals Scope of Miners' Medical Program

The annual report of the United Mine Workers Welfare and Retirement Fund, released last week, discloses the expenditure of \$57,783,116 for medical and hospital services in the fiscal year ended June 30, 1959. A grand total of 1,343,893 days of hospitalization was provided for 81,132 beneficiaries. Other statistics:

More than 7,000 private physicians gave professional care to miners, widows and others on a fee basis, the largest number ever paid by the Fund.

The union's 10 hospitals in West Virginia, Virginia and Kentucky provided 279,321 days of hospitalization for about 20,000 persons. Their combined out-patient load averaged 1,000 cases daily.

The annual report estimates that, over the past decade, direct payments from the trust fund to private physicians total more than \$180 million, while payments to hospitals exceed \$270 million.

An Indiana Physician Has Lost His Court Battle

An Indiana physician has lost his court battle in an income tax case which has unusual aspects. Background: the doctor agreed to take over the office equipment and practice of a friend who had died, subject to his paying the estate 60 per cent of the profits for each of the first two years. This was the sole consideration. In the first year, the estate paid income tax on its share and the doctor paid tax on his 40 per cent share.

In the second year, however, the estate received and complied with professional advice that its return should be considered not as ordinary income but as the product of a sale. The result was that the physician was held liable for payment of 100 per cent of the tax. He took it to court and lost. About \$10,000 in taxes was involved.

Summary of Views on Atomic War's Effects

Just released on Capitol Hill is a 58-page summary analysis of expert testimony given last June on the biological and environmental effects of nuclear war. It follows by one week the issuance of a report by the same Congressional committee on fallout and its consequences. The latest publication by the Joint Com-

mittee on Atomic Energy touches on blast, thermal, radiation and genetic effects of nuclear attack, environmental contamination and survival measures.

Five Times As Many U. S. Citizens Enter

Five times as many U.S. citizens enter Canadian and foreign medical schools as Canadian and foreign citizens matriculate at U.S. medical schools each year . . . the ratio of physicians to population in this country has fluctuated between 131 and 135 per 100,000 for the past two decades . . . in relation to population, physicians in private practice have declined 16 per cent since 1931 . . . numerically, the number of GP's has dropped by 3,500 during the same period while full time specialists have gone up by 69,000.

From The Secretary's Notebook

CLINICAL SESSION NOTES

Scientific Program

An excellent program for the Clinical Session to be held in Bangor on December 11 and 12, which appears in brief on the opposite page, has been arranged by the Program Committee, Edward B. Babcock, M.D., Chairman, Thomas H. Palmer, Jr., M.D. and James D. Clement, Jr., M.D. This merits your participation.

Special Meetings

The following Specialty Groups will meet at the close of the Scientific Program on Saturday, December 12:

Maine Society of Obstetrics and Gynecology

Maine Society of Anesthesiology

Committee on Aging

There will also be a meeting of the Maine Medical Association Council and of the Editorial Board of the Journal of the M.M.A.

Details concerning these meetings will reach you via flyer, official program and in the November issue of the Journal.

Evening Program

The Woman's Auxiliary to the Penobscot County Medical Society have made arrangements for a Cocktail Dance at the Bangor House on Friday evening, December 11, from 5:30 to 8:30 P.M. (Cocktails for this event are Dutch Treat.)

Dinner will be available in the Bangor House dining room until 9:00 P.M.

For The Ladies

In addition to the Cocktail Dance on December 12, a program is being arranged for the ladies as noted on the opposite page.

Reservations

A list of hotels and motels in the Bangor area will be sent to each member of the Association early in November.

Included with this list will be a card listing the various activities which is to be filled in and returned as indicated. Please make your return as prompt as possible.

CLINICAL SESSION OF THE MAINE MEDICAL ASSOCIATION

Bangor, Maine — December 11-12, 1959

FRIDAY, DECEMBER 11, 1959 AT THE EASTERN MAINE GENERAL HOSPITAL

10:30 A.M. **Registration**

11:00 A.M. TO 1:00 P.M. **"Treatment of Malignant and Benign Tumors of the Female Genital Tract"** — Panel

THOMAS H. GREEN, JR., M.D., Massachusetts General Hospital, Boston, Massachusetts, Moderator

WILLIAM M. SHUBERT, M.D., Bangor

DONALD F. MACDONALD, M.D., Bangor

SIDNEY CHASON, M.D., Bangor

EDWARD C. PORTER, M.D., Bangor

1:00 P.M. **Luncheon** will be served at the hospital
Speaker to be announced

2:30 P.M. **"Pitfalls in Surgical Treatment of G.I. Tract Diseases"** — Panel

BENTLEY P. COLCOCK, M.D., Lahey Clinic
Boston, Massachusetts, Moderator

ALLISON K. HILL, M.D., Chief of Surgery,
Eastern Maine General Hospital, Bangor

LLOYD BROWN, M.D., Bangor

5:30 TO 8:30 P.M. **Cocktail Dance** — Bangor House
(Cocktails — Dutch Treat)

SATURDAY, DECEMBER 12, 1959 AT THE EASTERN MAINE GENERAL HOSPITAL

8:30 A.M. **Registration**

9:00 TO 9:45 A.M. **"Adrenal Steroids in Ophthalmology"**

GARDNER N. MOULTON, M.D., Bangor

10:00 TO 10:45 A.M. **"Adrenal Steroids in Dermatology"**

MARGARET H. HANNIGAN, M.D., Auburn

11:00 A.M. TO 12:30 P.M. **"Adrenal Insufficiency"**

ALBERT E. RENOLD, M.D., Assistant Professor of Medicine, Harvard Medical School; Director, Baker Clinic Research Laboratories, New England Deaconess Hospital; Associate in Medicine, Peter

Bent Brigham Hospital and Assistant to
George W. Thorne, M.D.

12:30 P.M. **Luncheon** at the hospital

Remarks by DANIEL F. HANLEY, M.D., Executive Director, Maine Medical Association

2:00 TO 4:00 P.M. **"Adrenal Steroids in Internal Medicine"** — Panel

ALBERT E. RENOLD, M.D., Moderator

HARRY M. HELFRICH, JR., M.D., Presque Isle

ROBERT O. KELLOGG, M.D., Bangor

GEORGE J. ROBERTSON, M.D., Waterville

GEORGE W. WOOD, III, M.D., Bangor

AAGP Credits

Acceptable for Category II credit by the American Academy of General Practice, number of hours to be announced.

Evening Program

The Woman's Auxiliary to the Penobscot County Medical Society have made arrangements for the Cocktail Dance on Saturday evening.

For The Ladies

Mrs. Thomas H. Palmer, Jr., President of the Woman's Auxiliary to the Penobscot County Medical Society, is in charge of the program for the ladies, which will include a luncheon at the Bangor House on Saturday, December 12. Entertainment will be provided following the luncheon.

Complete program to be announced.

AMERICAN CANCER SOCIETY, INC.

1959 SCIENTIFIC SESSION PROGRAM

BILTMORE HOTEL, NEW YORK

OCTOBER 26-27, 1959

Symposium On Evaluation Of Early Diagnosis Of Cancer

A panel discussion will follow the presentation of papers in the first two sessions.

*Monday, October 26 — Morning Session—9:00 A.M.**THE ECONOMICS OF CANCER DETECTION*

- Dr. Leona Baumgartner
Commissioner of Health, City of New York, New York
- Dr. R. Lee Clark, Jr.
M.D. Anderson Hospital and Tumor Institute, Houston, Texas
- Dr. John W. Cline
Stanford University School of Medicine, San Francisco, California
- Dr. Emerson Day
Memorial Center for Cancer and Allied Diseases, New York, New York
- Dr. I. Phillips Frohman
Washington, D.C.
- Dr. Calvin T. Klopp
George Washington University School of Medicine, Washington, D.C.
- Dr. H. L. Kottmeier
Radiumhemmet, Stockholm, Sweden
- Dr. Eugene P. Pendergrass
University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania
- Dr. Danely P. Slaughter
University of Illinois College of Medicine, Chicago, Illinois

*Afternoon Session — 1:30 P.M.**THE VALUE OF PERIODIC EXAMINATIONS IN CANCER DETECTION*

- Dr. Roger Baker
Georgetown University School of Medicine, Washington, D.C.
- Capt. Robert B. Brown, MC, USN
U.S. Naval Hospital, Bethesda, Maryland
- Dr. Charles L. Easterday
Harvard Medical School, Boston, Massachusetts
- Dr. Ralph E. L. Hertz
Memorial Center for Cancer and Allied Diseases, New York, New York

- Dr. Edward F. Lewison
Johns Hopkins University School of Medicine, Baltimore, Maryland
- Dr. Grantley W. Taylor
Massachusetts General Hospital, Boston, Massachusetts
- Dr. Owen H. Wangenstein
University of Minnesota Medical School, Minneapolis, Minnesota
- Dr. Ashbel C. Williams
St. Vincent's Hospital, Jacksonville, Florida
- Dr. Robert M. Zollinger
Ohio State University College of Medicine, Columbus, Ohio

*Tuesday, October 27 — Morning Session—9:00 A.M.**PRECANCEROUS LESIONS AND THEIR TREATMENT*

- Dr. Thomas J. Anglem
Boston University School of Medicine, Boston, Massachusetts
- Dr. Russell S. Boles
University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania
- Dr. Murray M. Copeland
Georgetown University School of Medicine, Washington, D.C.
- Dr. Michael R. Deddish
Memorial Center for Cancer and Allied Diseases, New York, New York
- Dr. Frank W. Foote, Jr.
Memorial Center for Cancer and Allied Diseases, New York, New York
- Dr. John B. Graham
Roswell Park Memorial Institute, Buffalo, New York
- Dr. E. Cuyler Hammond
American Cancer Society, Inc., New York, New York
- Dr. Francis W. Lynch
University of Minnesota Medical School, Minneapolis, Minnesota

Dr. William S. MacComb
M.D. Anderson Hospital and Tumor Institute, Houston,
Texas

Dr. George T. Pack
Memorial Center for Cancer and Allied Diseases, New York,
New York

Dr. Fred W. Stewart
Memorial Center for Cancer and Allied Diseases, New York,
New York

Afternoon Session — 1:30 P.M.

TREATMENT OF EARLY CANCER

Dr. R. Lee Clark, Jr.
M.D. Anderson Hospital and Tumor Institute, Houston,
Texas

Dr. Edgar L. Frazell
Memorial Center for Cancer and Allied Diseases, New York,
New York

Dr. Arnold J. Kremen
University of Minnesota Medical School, Minneapolis,
Minnesota

Dr. Glenn H. Leak
University of Buffalo School of Medicine, Buffalo, New York

Dr. John C. McClintock
Albany Medical College, Albany, New York

Dr. Kenneth L. Pickrell
Duke University School of Medicine, Durham, North
Carolina

Dr. Neil W. Swinton
Lahey Clinic, Boston, Massachusetts

Dr. Howard Ulfelder
Harvard Medical School, Boston, Massachusetts

Dr. Jerome A. Urban
Memorial Center for Cancer and Allied Diseases, New York,
New York

SESSIONS ARE OPEN TO ALL MEMBERS OF THE MEDICAL
AND DENTAL PROFESSIONS AND STUDENTS

The Scientific Program of the American Cancer Society is acceptable for 12 hours of Category II credit by the American Academy of General Practice.

Inquiries concerning this program should be addressed to:

Director, Professional Education, American Cancer Society, Inc., 521 West 57th Street, New York 19, New York.

To: Members of the Maine Medical Association

Re: Symposium of Evaluation of Early Diagnosis of Cancer to be presented
by the American Cancer Society, Inc., New York City, October 26-27,
1959.

Stipends Available:

The Maine Cancer Society has made available through the Council of the Maine Medical Association, eighteen stipends of \$100 each to general practitioners attending this session.

Application:

If you have not made application through the Councilor for your District and are interested in attending this symposium, please apply to the Maine Medical Association, P. O. Box 240, Brunswick, Maine — *at once*.

NOTE: These sessions are open to all members of the medical profession.



ANSWERING QUESTIONS



Blue Shield and the New Challenge

The American doctor's eternal struggle to preserve his professional freedom is now being waged in a new arena. Ten years ago, the big question was whether medicine could develop a viable prepayment program by its own voluntary effort, aided by labor, management and local community leaders. The alternative then was the threat of compulsory health insurance, governmentally operated and controlled.

The product of our initiative — and of the people's tremendous response — is the vast Blue Shield-Blue Cross complex, supplemented by a tremendous expansion of the insurance industry's effort in this field.

Both the medically-sponsored nonprofit plans and the commercial insurance programs are based upon the traditional pattern of free choice of physician, fee-for-service, and the private relationship of patient and doctor.

In some segments of our economy today, both labor and management are showing a lively interest in providing medical care through a "closed panel" program, in which free choice would be limited, fee-for-service would be replaced by salaries or capitation payments, and the direct personal responsibility of the physician would be subordinated by collective controls.

The American Medical Association has acknowledged the legitimacy of these alternative programs and the right of the patient to choose the pattern or plan through which he wishes to prepay his medical care. This is realism.

But it is also realistic for us physicians to realize that ultimately we can preserve our traditional pattern of medical service only if our patients find that it meets their vital needs better than any other program.

Our own Blue Shield Plans offer us the best — and only — instrument through which we can control the economy of medicine and determine the shape of medical practice in the future.

But Blue Shield is *only* an instrument. The understanding, vision and leadership required to perfect this instrument — so that it will serve satisfactorily the needs of our patients — must come from us, acting through our county, state and national societies.



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Summary Report — First International Medical Conference On Mental Retardation

RUTH T. CLOUGH, MSCh, Conference Secretary

Current appraisal of problems in the field of mental retardation on a world basis marked the occasion of the First International Medical Conference on Mental Retardation in Portland, Maine, during the week of July 27-31, 1959. Organized in the relatively brief period of seven months, under the general chairmanship of Peter W. Bowman, M.D., Pownal, Maine, the Conference attracted physicians from 33 foreign countries and from 40 states in this country. Primarily a medical conference, the final half-day session was opened to members of allied professions.

Attendance totaled over 600 Conference participants. In addition, a large group of volunteer workers from the Woman's Auxiliary of the Cumberland County Medical Association, Greater Portland Association for Retarded Children, Pineland Parents and Friends Associates and other groups in the area provided hospitality, recreational and social aspects of the program. Wives and families of the delegates added another significant figure to the total of visitors attending Conference social events.

In addition to emphasizing the great need for continued research in the area of mental deficiency, the principal aim of the Conference was to take steps toward forming a permanent organization to continue this work. Early in the Conference period, a small group of physicians representing leading countries of the world met at the call of Howard V. Bair, M.D., Parsons, Kansas — a member of the Conference Program Committee — to explore ways and means of effecting this goal. After an evening's deliberation, it was voted to establish a permanent organization and to hold the Second International Medical Conference on Mental Retardation in Vienna, Austria, in 1961. Dr. K. Kun-dratitz, Professor of Pediatrics, University of Vienna, was named chairman of the Conference Committee. Also named to the Committee were: J. D. Spillane, M.D., Cardiff, Wales; H. Bickel, M.D., Marburg, Germany; H. Asperger, M.D., Innsbruck, Austria; T. Arneus, M.D., Stockholm, Sweden; S. Nielson, M.D., Copenhagen, Denmark; G. Frontali, M.D., Rome, Italy; F. Groer, M.D.,

Warsaw, Poland; A. Minkowski, M.D., Paris, France; A. Chattas, M.D., Cordoba, Argentina; Peter W. Bowman, M.D., and Hans Mautner, M.D., Pownal, Maine, USA.

The general structure of the Conference was that of plenary sessions held daily during which scientific papers were presented, followed by a general discussion period led by Hans V. Mautner, M.D., Pownal, Maine, who served as program chairman for the Conference. In all, 35 main speakers participated in the program.

Following is a brief summary of these papers: A report about pathological findings in the brain of mentally retarded patients — Paul I. Yakovlev, M.D., Harvard University, Boston, Massachusetts; Malformations produced in animals by abnormal food, poisons, or other types of damage — J. Warkany, M.D., University of Cincinnati, Ohio; Inborn metabolic errors explained by abnormalities in the enzyme function — D. Y. Y. Hsia, M.D., Northwestern University, Chicago, Ill.; Report on experiments concerning autonomic regulation in the brain, the complexities of this regulation and its relation to emotion and mental development — E. Gellhorn, M.D., University of Minnesota, Minn.; A report on experiments demonstrating animal behaviour following damage to different parts of the brain — W. R. Ingram, M.D., and I. R. Knott, M.D., University of Iowa, Iowa City, Iowa; Normal and abnormal electrogenesis in the fetal brain — F. Morrell, M.D., W. Bradley, M.D., T. Kaiser, M.D., University of Minnesota, Minn.; Pathological findings in birth trauma and asphyxia, the mechanical bases, and proposals for prophylaxis — Philip Schwartz, M.D., Warren State School, Pa.; The relation of breathing in the newborn to the acid-base equilibrium and its importance for asphyxia — L. S. James, M.D., Columbia University Presbyterian Medical Center, New York; Observations in differences of metabolism and oxygen utilization in animals before and after birth — W. A. Himwich, M.D., Galesburg State Research Hospital, Ill.; Complications of pregnancy and mental deficiency — B. Pasamanick, M.D. and H. Knobloch, M.D., University Health Center, Colum-

bus, Ohio; Common malformations of skull and spine in the region of the foramen magnum — J. D. Spillane, M.D., University of Cardiff, Wales; The Treacher Collins syndrome and mental deficiency — L. Kulczycki, M.D., Harvard University, Boston, Mass.; Sequels of infectious disease of the central nervous system on mental development and the common personality changes — H. Asperger, M.D., University of Innsbruck, Austria; Prenatal infections and their results in mental development and malformation — J. Sutter, M. D., University of Alger, Algeria; Present knowledge of metabolism of the amino acids and the diseases which are now considered to be related to abnormalities in the amino acid metabolism — Richmond S. Paine, M.D., Harvard Medical School, Boston, Mass.; A report of a nine-year experiment on phenylalanine low diet in phenylketonuria — H. Bickel, M.D., University of Marburg, Germany; A survey on the chemical background of lipid thesauroses, including gargoylism — P. B. Diezel, M.D., University of Heidelberg, Germany; A report on metabolism of copper, iron, and lead and about related diseases with mental deterioration, — also a paper on chemical base of phenylketonuria — J. N. Cumings, M.D., University of London, England; A tolerance test in phenylketonurics with p-Hydroxy Phenylpyruvic Acid — H. D. Grumer, M.D., Pownal, Maine; Phenylketonuria — H. A. Waisman, M.D., University of Wisconsin, Madison, Wisconsin; Autonomic responsiveness in newborn and older children — E. W. Gordon, M.D., Brooklyn, N. Y.; The detection of amino-aciduria in retarded children by a simple rapid method — H. Ghadimi, M.D., and H. Shwachman, M.D., Children's Medical Center, Boston, Mass.; Present knowledge of the pathology and physiology of mongolism — C. E. Benda, Clark University, Worcester, Mass.; Etiological aspects of mongolism — J. Oster, M.D., Central Hospital, Randers, Denmark; Erythroblastosis as base of mental retardation — W. W. Zuelzer, M.D., Wayne State University, Detroit, Mich.; Kernicterus — H. S. Baar, M.D., Pownal, Maine; The congenital nervous system in congenital heart diseases — M. M. Cohen, M.D., University of Minnesota, Minn.; Observations on the possibility of drug treatment, fever therapy, irradiation in mental deficiency — K. Kundratitz, M.D., University of Vienna, Austria; Possible surgical therapy in mentally retarded children, especially in hydrocephalus — J. M. Tarlov, M.D., New York Medical College, New York; Recent findings of chromosomal abnormalities in mentally retarded persons — P. E. Polani, M.D., Guy's Hospital, London, England; Diagnostic and therapeutic aspects of childhood schizophrenia — L. Bender, M.D., State Department of Mental Hygiene, New York; Differential diagnosis of autism, childhood schizophrenia and Heller's Disease — C. E. Benda, M.D.; Etiology and treatment of children in a typical development (childhood psychoses) — P. H. Gates, M. D., James Jackson Putnam Children's Center, Boston, Mass.; Mental retardation as part of the training program in child psy-

chiatry — G. E. Gardner, M.D., Judge Baker Guidance Center, Boston, Mass.; Behavior problems in brain damaged children — H. Asperger, M. D.

Session leaders were: John W. Gerrard, M.D., University of Saskatchewan, Canada; G. Jervis, M.D., Letchworth Village, Thiells, New York; Asbjörn Fölling, M.D., Tvedestrand, Norway; G. Frontali, M.D., University of Rome, Italy; A. Minkowski, M.D., Paris, France.

Scientific displays featured the subjects of phenylketonuria, exhibited by Willard R. Centerwall, M.D., Los Angeles, California; A simple method for the detection of amino-aciduria — exhibited by Drs. Ghadimi and Shwachman, Children's Medical Center, Boston; A dietary treatment of phenylketonuria — by Richmond S. Paine, M.D., Harvard Medical School; Some rare types of mental deficiency — the exhibit of the Pineland Hospital and Training Center, Pownal; Toxoplasmosis — exhibited by H. S. Baar, M.D., Pownal; Atarax in the treatment of mentally retarded children — exhibited by Charles H. Carter, M.D., Gainesville, Florida; Acrocephalo syndactyly — by Hedwig H. Holzer, M.D., State School, Taunton, Mass.; Developmental abnormalities in the region of the foramen magnum — by J. D. Spillane, M.D., Cardiff, Wales. These, together with several commercial exhibits, were largely attended by the delegates during the visiting periods set aside for exhibit viewing each day.

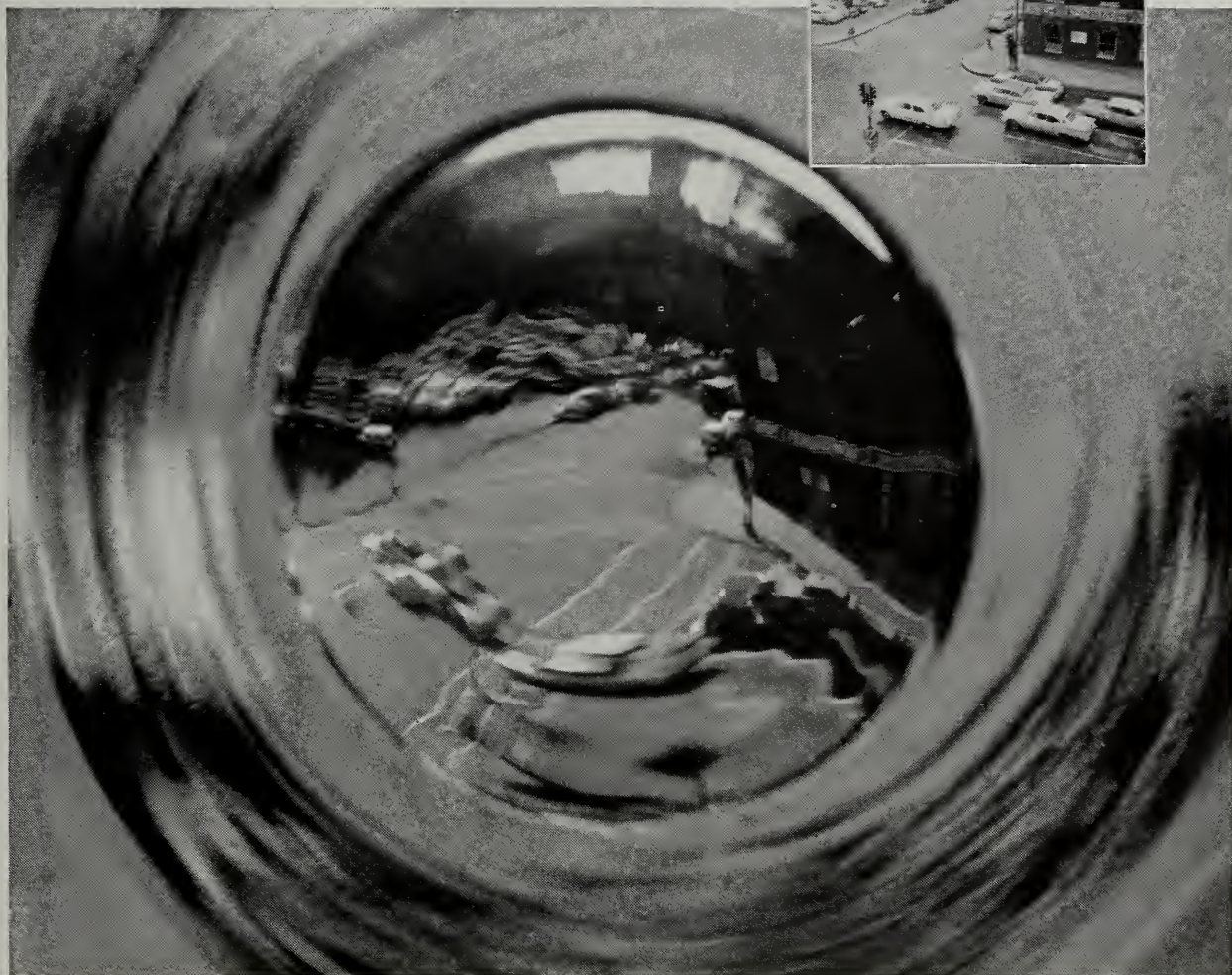
Films also proved most popular, the daily viewings attracting an average of some 100 delegates. Films shown were: "Clinical Types of Mental Deficiency"; "Disorders of Gait"; "Electroencephalogram"; "Abnormal Involuntary Movements"; "Dentistry In The Handicapped Child"; "Behaviour Disturbances after Bilateral Removal of the Frontal Areas of the Cortex of Cats"; "Intelligence in White Rats"; "Role of Hypothalamus in Emotion and Behaviour."

Concluding on the following high note, the Conference delegates voted unanimously on a resolution "to recommend to all Governments of the World that sufficient funds be provided in their annual budgets for improvement and deepening of our present knowledge of Mental Retardation, and to further its medical treatment, its social and educational needs, its research; and to create a better understanding for the psychological, social, economic, legal and medical needs of the mentally retarded individual."

Queried as to his opinion as to the most important result of the Conference, one of the leaders stated — in part: "Progress in our knowledge about mental deficiency . . . will only come from hard clinical and laboratory work. The basic sciences are of primary importance. . . . If Dr. Fölling had not observed 25 years ago that the urine of some idiots turns green when ferric chloride is added, Jervis ten years later could not have shown that these patients have a lack of the enzyme

Continued on page 382

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, *Lancet* 2:347 (Aug. 16) 1958.

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Research in the Service of Medicine

SEARLE

Necrologies

CLARENCE R. O'CROWLEY, M.D.

1880 - 1959

Clarence R. O'Crowley, M.D., internationally known urologist, died at his home in Christmas Cove, Maine on March 28, 1959. A resident of Maine for only five years, Dr. O'Crowley was held in high esteem by all who knew him and was honored by the Maine Medical Association at its annual session in 1955 when he was presented with the association's fifty-year lapel pin.

Dr. O'Crowley's achievements in his chosen specialty were evidenced by the honors bestowed upon him by the hospitals and associations which he served and by the Academy Award presented to him in 1947 by the Academy of Medicine of Northern New Jersey. He was consulting urologist to the following hospitals in New Jersey: Newark City Hospital, Newark; Presbyterian Hospital, Newark; Clara Maass Memorial Hospital, Newark; Newark Beth Israel Hospital, Newark; St. Michael's Hospital, Newark; the Eye and Ear Infirmary, Newark; the Hospital for Crippled Children, Newark; Alexian Brothers Hospital, Elizabeth; Perth Amboy City Hospital, Perth Amboy; West Hudson Hospital, Kearny; St. Mary's Hospital, Orange; Irvington General Hospital, Irvington; Alexander Linn Hospital, Newton; Dover General Hospital, Dover; New Jersey State Hospital, Morris Plains; Isolation Hospital, Soho; Newton Hospital, Newton; Veterans Hospital, Lyons; Veterans Hospital, East Orange, and the Essex County Sanatorium, Verona. He was on the courtesy staff for the St. Barnabas Hospital in Newark.

He was a past president of the American Urological Association, the American Association of Genito-Urinary Surgeons, the New York Urological Society, the Essex County Medical Society, the Essex County Pathological and Anatomical Society and the Society of Surgeons of New Jersey. He was an Honorary Member of the Maine Medical Association and the Lincoln-Sagadahoc County Medical Society, a member of the Essex County Medical Society, the New Jersey State Medical Society,

the American Medical Association, the Society of Surgeons of New Jersey, the New York Urological Society, the American Urological Association, the American Association of Genito-Urinary Surgeons, the International Urological Society of Vienna in 1936 and New York City in 1952, the Editorial Board of the American Journal of Surgery and the Editorial Board of the Urologic and Cutaneous Review, Phi Sigma Kappa, the American Association of University Professors and a Founder Member of the Academy of Medicine of Northern New Jersey.

Dr. O'Crowley was also an Honorary Member of the New York Urological Society and the Omaha, Nebraska Medical Association, a Diplomate of the American Board of Urology, a Fellow and Charter Member of the American College of Surgeons and a Corresponding Member of the Berlin Urological Association, Berlin, Germany and of the Societa Piemontese di Chirurgia, Turin, Italy. He was Instructor of Urology at the New York Postgraduate School and Hospital from 1905 to 1920 and Assistant Professor of Urology in the Graduate School of the University of Pennsylvania for 22 years. He was a veteran of the Spanish-American War and World War I, attaining the rank of captain.

Dr. O'Crowley was born on May 8, 1880, in Newark, New Jersey, the son of Richard Joseph and Sara Jane Rutherford O'Crowley. He graduated from the College of Physicians and Surgeons, New York City, in 1904 and interned at the City Hospital in Newark, New Jersey. He was in practice in Newark from 1905 until 1954 when he came to Maine, devoting over 46 years of this time to the practice of urology exclusively.

Surviving Dr. O'Crowley are his widow, the former Violet Park, a son, Clarence R., Jr., Cranston, Rhode Island; two sisters, Miss Irene O'Crowley, Highland, New Jersey and Mrs. H. C. Horsford, Point Pleasant, New Jersey, and two grandchildren.

CECIL F. THOMPSON, M.D.

1899 - 1959

Cecil F. Thompson, M.D. of Phillips, died July 8, 1959.

Dr. Thompson was born in Freeman, Maine, November 15, 1899, the son of Frank A. and Mabel Page Thompson. He was graduated from Kingfield High School in 1917 and remained to teach there. He served the SATC during the first World War. He was graduated from Bowdoin College in 1923, received his medical degree from Tufts College Medical School in 1926 and interned at the Eastern Maine General Hospital in Bangor. Dr. Thompson began his general practice in Phillips in 1927, serving that community and the surrounding area for 32 years.

Dr. Thompson was a member of the staff of the Franklin County Memorial Hospital, Farmington. He was a past president and past treasurer of the Franklin County Medical Society,

a member of the Maine Medical Association and of the American Medical Association.

He was a member of the Blue Mountain Lodge, AF and AM, the Prescott-Fairbanks Post of the American Legion and the Methodist Church of Phillips. The Phillips High School class of 1959 dedicated its yearbook to Dr. Thompson for his service to the school and the town.

Dr. Thompson is survived by his widow, the former Olive B. Ross of Phillips; two daughters, Mrs. Nelda Worthley, Cumberland Center, and Mrs. Jean Diben, Galesburg, Illinois; a son, Gordon, U. S. Army, Fort Benning, Georgia; a sister, Mrs. Wendell Moore, North Jay; three brothers, Fred, West Farmington, Austin, Kingfield, and Julien, Skowhegan; four grandchildren and several nieces and nephews.

CHARLES H. LEACH, M.D.

1873 - 1959

Charles H. Leach, M.D., of Tenant's Harbor, died on May 25, 1959.

Dr. Leach was born in Waldoboro, Maine on September 25, 1873, the son of Albert and Fannie Cleveland Leach. He attended Higgins Classical Institute and received his medical degree from Bowdoin College in 1899. He married Nina B. Williamson of Rockland, who is now deceased.

Dr. Leach practiced medicine in Litchfield and Lincolnville for six years, in South China for 12 years and in Tenant's Harbor for 12 years. He was superintendent of the Pineland Hospital and Training Center at Pownal for several years be-

fore he went to Tenant's Harbor. He was also a member of the assistant staff of the Knox County Hospital in Rockland.

In 1954, Dr. Leach, an honorary member of the Maine Medical Association, received a pin honoring his 55 years as a doctor. He was also a member of the Knox County Medical Society and the American Medical Association.

Dr. Leach was a member of the Eureka Lodge of Mason, Naomi Chapter, OES, of Tenant's Harbor.

Surviving are one niece, Miss Margaret Heald of Islington, Massachusetts and several cousins.

ARTHUR H. SAMPSON, M.D.

1923 - 1959

Arthur H. Sampson, M.D., of Damariscotta, died in the crash of his plane in the Biscay Pond area on June 25, 1959.

Dr. Sampson was born in Boston, Massachusetts on May 17, 1923, the son of Arthur H. and Pearl D. Sampson. He graduated from Bowdoin College in 1945 and Yale University School of Medicine in 1949. He interned at Central Maine General Hospital in Lewiston and remained as a resident until 1954. He was appointed to the staff of the Miles Memorial Hospital in Damariscotta in 1954 where he became chief surgeon.

He served as a Seaman in the Navy during World War II and as a Captain in the Air Force in Korea in 1951 and 1952 after attending the School of Aviation Medicine in 1950.

Dr. Sampson was a member of the Lincoln-Sagadahoc County Medical Society, the Maine Medical Association and the American Medical Association.

Surviving Dr. Sampson are his parents of Wellesley, Massachusetts and Little Sebago Lake and a sister, Mrs. Murray Smart of Cape Elizabeth.

F. DONALD DORSEY, M.D.

1895 - 1959

F. Donald Dorsey, M.D., of Portland, died July 4, 1959.

Dr. Dorsey was born in Mt. Airy, Maryland on June 28, 1895, the son of Frank G. and Rosa MacDonald Dorsey. He graduated from Comray Hall Preparatory School and Dickinson College, both in Carlisle, Pennsylvania. He received his medical degree from Hahnemann Medical College in Philadelphia in 1921, and interned at St. Luke's Hospital in Philadelphia and the Wilmington, Delaware Homeopathic Hospital.

A member of the staffs of the Maine Medical Center and Mercy Hospital, Dr. Dorsey was a former president of the Portland Medical Club. He also held membership in the Cumberland County Medical Society, the Maine Medical As-

sociation, the American Medical Association and the New England Obstetrical-Gynecological Society.

His fraternal affiliations included Ancient Landmark Lodge, AF&AM; 32nd Degree Scottish Rite, Valley of Portland; Kora Temple Shrine, Lewiston; Kora Shrine Club, Portland, Knights of Constantine, Royal Order of Jesters and Portland Lodge of Elks. He was a former member of the Portland and Cumberland clubs.

Dr. Dorsey is survived by his widow, Mrs. Elsie Brown Dorsey; a son, F. Donald Dorsey, Jr., Freeport; a daughter, Mrs. John Loth, Brooklyn Heights, New York; a sister, Miss Sophie S. Dorsey, Portland, and three grandchildren.

JAMES G. S. JAMIESON, M.D.

1876 - 1959

James G. S. Jamieson, M.D., formerly of Portland, Maine, died July 23, 1959 at his Winchester, England home.

Dr. Jamieson was born April 6, 1876 in Ayr, Scotland, the son of William Hunter and Jean MacKechens Jamieson. He was educated at Ayr Academy and later entered the University of Edinburgh where he was awarded his M.A. degree in 1896, M.B. and Ch.B. degrees in 1900 and his M.D. degree in 1902. He was a resident surgeon and resident physician in the Royal Infirmary, Edinburgh. In 1902 he studied at the University of Vienna, following which he began his practice in Brechin, Scotland where he remained until 1909 when he moved to England.

Dr. Jamieson came to America in 1914 and practiced in

New York for one year before locating in Portland. He specialized in internal medicine. In 1927 he accompanied Dr. William Beebe on his Natural History Expedition to Haiti as physician for the group.

Dr. Jamieson became an honorary member of the Maine Medical Association and the Cumberland County Medical Society in 1952. He was also a member of the American Geriatrics Society and the American Medical Association.

He was president of the Scottish St. Andrew's Society for two years and was a member of the Cumberland Club and the Portland Country Club.

Dr. Jamieson is survived by his widow, the former Mabel Alice Perkin of Surrey, England.

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County Society Notes

HANCOCK

September 9, 1959

The 330th meeting of the Hancock County Medical Society was held at the Hancock House, Ellsworth, Maine on September 9, 1959. Thirteen members were present.

President Allan Woodcock, M.D., and Mrs. Woodcock honored the society with a visit. Dr. Woodcock discussed a current problem with the society.

Sara H. Bowditch, M.D., of Washington, D.C., was present for this meeting and she spoke on "Medicine, Voodoo and Haiti" on the basis of her recent sojourn in Haiti for 18 months.

RUSSELL G. WILLIAMSON, M.D.
Secretary

KENNEBEC

September 17, 1959

The Kennebec County Medical Society held its September meeting at the Augusta House in Augusta, Maine. Dinner was served at 7:00 p.m. to approximately 35 members and guests.

The business meeting began at 8:00 p.m. with the President, Anthony E. Lepore, M.D., presiding. The minutes of the previous meeting were read by the secretary.

Dean H. Fisher, M.D. presented resolutions on the death of Roscoe L. Mitchell, M.D. Dr. Fisher was appointed Chairman of the Resolutions Committee at the last meeting held on May 21, 1959, the other members being Drs. Wilson H. McWethy and Clarence R. McLaughlin.

A letter received from Daniel F. Hanley, M.D., containing information and requests from Elton R. Blaisdell, M.D. regarding Diabetes Detection Week (November 15 through 21), was read and the following Chairmen appointed for their respective districts: Stanley C. Beckerman, M.D., Waterville; Brinton T. Darlington, M.D., Augusta, and Kurt A. Sommerfeld, M.D., Gardiner.

The speaker of the evening was John H. Bland, M.D., Professor of Clinical Medicine at the University of Vermont College of Medicine. His topic was "Relationship between Water and Electrolytes to the Connective Tissue System." The talk was most thorough and interesting, explaining the inter-relation between water and the electrolytes and the metabolism of the connective tissue system. He made the metabolism of these combined systems very clear and explained the use of this information in clinical work.

ARCH H. MORRELL, M.D.
Secretary

New Members

SOMERSET

Marian L. Strickland, M.D., Easy Street, Canaan

Deceased

ANDROSCOGGIN

Leopold O. Roy, M.D., 54 Pine Street, Lewiston, October 5, 1959

AROOSTOOK

Lloyd H. Berrie, M.D., 64 Sweden Street, Caribou, June 6, 1959

PENOBSCOT

Louis L. Theriault, M.D., 197 Center Street, Old Town, August 31, 1959

SOMERSET

Walter S. Stinchfield, M.D., Court Street, Skowhegan, August 8, 1959

News and Notes

125 Years of Medicine Displayed

The Penobscot County Medical Society in conjunction with Bangor's 125th birthday celebration, has an exhibit on display at the Bangor Library appropriately titled — 125 years in medicine.

A recent editorial in the Bangor Daily News highly recommends this medical display which depicts the many changes that have taken place in medicine during the past century and a quarter.

Why not make it a point to visit this exhibit while you are in Bangor for the Clinical Session on December 11 and 12.

New Members on the Board of Registration of Medicine

The following members have been appointed by Governor Clinton A. Clauson and his Council to serve on the Board of Registration of Medicine: Daniel F. Hanley, M.D., Brunswick, J. Paul Nadeau, M.D., Lewiston and George E. Sullivan, M.D., Fairfield.

Health Council of Maine Officers

At the annual meeting of the Health Council of Maine held last May, George T. Nilson was elected President; Roland E. Irish, Vice-President; Mrs. Hugo Eckmann, Secretary, and Frederick P. O'Connell, Treasurer. The president announced the

following committee chairmen: George R. Petty, Public Relations; Quentin Unger, Health Careers; Edmund P. Wells, Legislation; Dorothy M. Mills, Nominations, and Helen P. Dunn, R.N., Program.

Maine Doctor on National Committee

Peter W. Bowman, M.D., Superintendent of Pineland Hospital and Training Center, has been appointed to the Standing Committee on Mental Deficiency of the American Psychiatric Association by the President of that group, Dr. William Malamud.

First Annual Meeting for Maine Hypnotists

The first annual meeting of the Maine Section, American Society of Clinical Hypnosis, was held in Auburn at the Stephens House on October 4, 1959. President Donald Coulton, M.D., Bangor, introduced Robert F. Russell, M.D., Penobscot, who spoke on "Management of Pain by Hypnotherapy." Dr. William Mouradian, Bangor, spoke on "The Use of Hypnosis in Dentistry" and Dudley B. Tyson, M.D., Attleboro, Massachusetts, on "The Use of Hypnosis in Anesthesia." A short business meeting followed.

Other officers of the group are Clyde I. Swett, M.D., Isand Falls, Vice-President; J. Paul Nadeau, M.D., Lewiston, Secretary; Carl M. Haas, M.D., Biddeford, Treasurer-Recorder, and Simon C. Beaudet, M.D., Lewiston, Program Director.

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Announcements

National Conference on the Medical Aspects of Sports

Immediately preceding the AMA Clinical Meeting in Dallas, Texas, the National Conference on the Medical Aspects of Sports will be held, on November 30, 1959. Lectures will include "Amphetamine Sulphate and Athletic Performance, II. Subjective Responses" by Henry K. Beecher, M.D., "Exercise and the Kidney" by Warren R. Guild, M.D., "Medical Program for High School Football" by Joseph H. Burnett, M.D., "Exercise and the Oxygen Debt" by David B. Dill, M.D., "The Biodynamic Potential of the American Male Population" by Bruno Balke, M.D., "The Role of Physical Conditioning in Prevention of Athletic Injury" by Hans Kraus, M.D. and "The Pathology of Trauma" by Richard Patton, M.D. Panels will discuss the following subjects: "The On-Field Duties of the Team Physician" and "The Prevention of Head Injury in the Athlete." At the luncheon meeting "Youth Fitness" will be the theme. Movies will cover the Olympic Games during the evening session.

For further information, write to the Committee On The Medical Aspects Of Sports, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

American Board of Obstetrics and Gynecology

The Part I Examinations of the American Board of Obstetrics and Gynecology are to be held in various parts of the

United States and Canada, on Friday, January 16, 1960, at 2:00 p.m.

Candidates notified of their eligibility to participate in Part I must submit their case abstracts within thirty days of notification of eligibility. No candidate may take the Written Examination unless the case abstracts have been received in the office of the Secretary.

Current bulletins outlining present requirements may be obtained by writing to the Secretary's office: Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

New Clinical Center Study on the Stein-Leventhal Syndrome

An investigation of the role of the adrenal gland in the Stein-Leventhal syndrome has been initiated at the Clinical Center, National Institutes of Health. Salient features in this syndrome include oligomenorrhea, hirsutism and polycystic ovaries.

The cooperation of interested physicians in referring laparotomy-proven cases is invited. Referral letters or phone calls will receive prompt attention and should include detailed medical information about the patient.

Accepted patients will be studied for varying periods up to several weeks. Upon completion of their study, patients will be returned to the care of their referring physician, who will also receive a detailed narrative summary. In some instances

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it may be desirable to arrange for occasional followup visits to the Clinical Center. These would supplement rather than substitute for visits to the patient's own physician.

Physicians interested in the possibility of referring patients should write or telephone: J. E. Rall, M.D., Chief, Clinical Endocrinology Branch, National Institute of Arthritis and Metabolic Diseases, Bethesda 14, Maryland (OLiver 6-4000, Ext. 4181); or Saul W. Rosen, M.D., Clinical Associate, National Institute of Arthritis and Metabolic Diseases, Bethesda 14, Maryland (OLiver 6-4000, Ext. 2936).

American College of Obstetricians and Gynecologists

District V of The American College of Obstetricians and Gynecologists will hold its annual meeting in the Statler Hilton Hotel, Detroit, November 18 through 21, 1959. This district comprises Indiana, Kentucky, Michigan, Ohio and Ontario. The scientific program on November 19 and 20 will consist of five panels, eight scientific papers, and two prize-award papers by residents in obstetrics and gynecology. For further information, write to Dr. Arthur G. King, District V Chairman, 199 William Howard Taft Road, Cincinnati 19, Ohio.

District IV of The American College of Obstetricians and Gynecologists will hold its annual meeting at the Americana Hotel, Bal Harbour, Miami Beach, Florida on October 30 and 31, 1959. This district comprises the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Puerto Rico and the Virgin Islands. The scientific program will consist of 16 papers and two panels. For further information, write to Dr. W. Norman Thornton, Jr., University of Virginia, Charlottesville, Virginia.

District VIII, comprised of Alaska, Arizona, California,

Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming, Alberta, British Columbia and Hawaii, will hold its annual meeting at the Royal Hawaiian Hotel, Honolulu, Hawaii, November 15 through 22, 1959. The scientific program, spread over four days, will consist of 15 formal papers, 20 round tables and 45 breakfast conferences. For further information, write to Dr. George E. Judd, 2010 Wilshire Boulevard, Los Angeles 57, California.

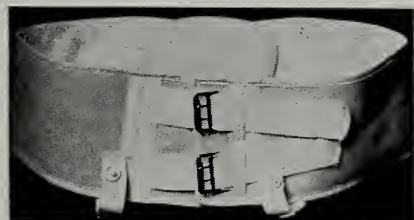
13th Annual Postgraduate Assembly, San Diego County General Hospital

The 13th Annual Postgraduate Assembly, sponsored by the San Diego County General Hospital will be held on Wednesday, November 4, and Thursday, November 5, 1959, at the County Hospital. Ophthalmology, ENT, Pediatrics, Urology, Obstetrics, Gynecology, Radiology and Pathology are some of the subjects that will be covered. Additional information may be obtained by writing to Walter Ballard, M.D., Registrar, 525 Hawthorn Street, San Diego, California.

Conference on Mycobacterial and Mycotic Diseases

Mycobacterial and mycotic diseases with special reference to childhood will be discussed by a number of medical authorities at a one-and-a-half day conference in New Orleans, Louisiana on December 10 and 11, 1959. The event is to be sponsored by TAGNO, the Tuberculosis Association of Greater New Orleans, and cosponsored by the Louisiana State Medical School, the Tulane University School of Medicine and the Orleans Parish Medical Society.

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The Assembly is sponsored by the Massachusetts Medical Society in cooperation with the State Medical Societies and State Chapters of the American Academy of General Practice of Maine, New Hampshire, Rhode Island and Massachusetts.

The Conference will be underwritten by TAGNO and there is no registration charge. Specialists, general practitioners, pediatricians and graduate nurses are being invited to attend the sessions. For additional information contact Findley Raymond, Director of Public Information, TAGNO, 1240 Camp Street, New Orleans 13, Louisiana.

International College of Surgeons Cancels November Meeting

The Mid-atlantic meeting of the United States Section, International College of Surgeons, scheduled to be held at Hot Springs, Virginia, November 16 through 18, has been cancelled.

FIRST INTERNATIONAL MEDICAL CONFERENCE — *Continued from page 374*

which oxidizes phenylalanine to tyrosine, and again — ten years later, Bickel would not have been able to treat these patients with the adequate diet so that they do not develop into idiots, but rather, into more or less useful members of society. Similar things have been known for a long time in respect to cretins. . . . Some will ask: 'Is so much research necessary for such

meagre results?' The results do not remain meagre when looked at from the point of view of the patients, or even better, the parents. . . ."

The proceedings of the Conference will be published and should be available by early Spring of 1960. These will include the printing of all scientific papers in full, together with the ensuing discussions.

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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, November, 1959

Number 11

Health Manpower Needs Of The Nation*

LEONARD A. SCHEELE, M.D.**

By inviting me to this meeting, you have involved yourselves, and me, in something very like one of those 3-way remote control conversations that television has popularized — the only difference is that we are beating TV at its own tricks and achieving the same effect without benefit of electronics. Call it coincidence if you will — but here are the facts:

Here I am in the State of Maine. I have come through the good offices of the National Health Council. As the first Chairman of its Commission on Health Careers, I shall be talking about a first love — health manpower needs. Meantime, the President of the National Health Council, Dr. Ruth Freeman, has gone to the City of Brotherly Love, and the Council's Executive Director, Phil Ryan, is being jet-propelled to the West Coast, the span of a continent away from both Augusta and Philadelphia. As you may have guessed by now, one way or another, all three of us will be speaking on the same subject — health manpower and how the Council's Health Careers Program is working toward a breakthrough in this roadblock to health progress.

So you see, it's not too far fetched to claim that we have our own coast-to-coast hook-up. In fact, with Howard Ennes, who helped start the Program, meeting Mr. Unger and Miss Clough of your Health Careers Committee at an international health education meeting

in Dusseldorf, Germany just about now, it looks as if we have established a transatlantic contact in your and our program.

More seriously, the Health Careers Program involves a great deal more than just talk. Doing something about health manpower shortages requires action — vigorous, persistent, and nationwide. Through the National Health Council's Commission on Health Careers, and through the cooperation of National, State and local organizations, we are taking action and we are making progress.

Because Health Careers — as an idea and as a way of working together — represents the framework, the context, for everything I shall be discussing with you, I want to take several minutes to review the who, how and what, that gives life and impetus to this great national effort.

As you know, the Health Careers Program was established by the National Health Council and operates within the Council structure. Most of you know — but for those who don't, the National Health Council is the combined creature of many voluntary health agencies and has its office in New York City. This means that the Health Careers program came into being through the cooperation of the Council's member agencies. Membership now numbers 65 — substantially all the major national professional societies and voluntary agencies in the health field, as well as Federal agencies, civic organizations and some industries with health interests. The mainspring in Health Careers — and in all the Council's other activities — is the initiative and teamwork of the Council's members. In fact, the Council's work as a whole is their program; its basic

*Presented at the Annual Meeting of the Health Council of Maine at Augusta, May 15, 1959.

**Dr. Scheele was formerly Surgeon General of the U. S. Public Health Service and is now President of Warner-Chilcott Laboratories, Division of Warner-Lambert Pharmaceutical Company, Morris Plains, New Jersey. In its first year, just ending, he has served as Chairman of the National Health Council's Commission on Health Careers.

purpose is to give the national health agencies the means of acting together whenever and wherever joint action is in the interest of their individual and collective purposes.

One of the most effective ways in which the National Health Council promotes the common objectives is through the National Health Forums held annually to focus attention and stimulate action on a major national health problem. A month ago, for example, the 1959 Forum was held in Chicago and highlighted "The Health of People Who Work," and made a significant contribution to occupational health.

Perhaps you won't mind my putting in a special plug for next year's Forum — because in 1960 it will deal with an urgent problem here in Maine and elsewhere — "The Health of Older People."

This is how the Health Careers Program got its start — in the 1954 Forum on "Changing Factors in Staffing America's Health Services." The Program itself went into operation the following year with the publication and nationwide distribution of the Health Careers Guidebook. This was made possible through the public interest support of The Equitable Life Assurance Society.

The first goal was to reach the nation's young people and, for this purpose, the Guidebook went to 115,000 high schools in the country for use by their counselors, as well as to health agencies, libraries and other centers of career information. But books are only a tool. It takes people, using the tools, to do a job. So the second goal of the Health Careers Program was to reach community leaders and promote community action. With the cooperation of the Council's members and other national agencies, around 100 all told, this home-town development gathered momentum rapidly — and it is still moving full steam ahead.

The Commission on Health Careers is the direct outgrowth of this experience. Its purpose is to join health professions, health agencies, and citizens, in broadening the attack on health manpower shortages. In operation little more than a year, the Commission has already proved its worth in strengthening recruitment efforts and in identifying other strategic points of attack. This has been possible because the participating national agencies are making the most of what the Commission, as a new ally in promoting Health Careers, can contribute to their partnership. Representing the public interest in health manpower, the Commission brings together a responsible body of National leaders. In composite, its membership provides a background of broad experience in business, labor, education, communications and public affairs, as well as in health. I cannot neglect this opportunity — the first I have had — to pay public tribute to my successor as Commission Chairman.

Only last week Dr. Alvin C. Eurich, Vice-President of The Fund for the Advancement of Education, accepted this appointment. As he enters upon his term of office, I congratulate the Commission — and every-

one interested in the Health Careers Program. Under Dr. Eurich's Chairmanship, we can be confident of continuing and increasing progress.

The Commission members have already demonstrated that they see the Health Careers task in its full national dimension. They are taking responsibility for leadership — in examining the health manpower problem whole, with all its ramifications; in encouraging new ways to help meet personnel needs; in stimulating public as well as professional understanding and action.

But they also know that this is too big a job for the Commission or any other group to undertake single-handed. They believe that it calls for a broad and effective alliance. The Commission's share in this partnership is to supplement and round out the activities of the individual professions and to provide a focal point for a consistent and concerted nationwide attack.

Though — or perhaps because — the Commission sees the problem in this broad perspective, it is insistent on getting practical results. That is why it puts so much emphasis on recruitment, making common cause with all the health professions in getting, and keeping, the people required to strengthen nationwide health services and to assure health progress.

To underpin national and local recruitment efforts, the Commission sees the need for more factfinding and evaluation, as well as public information. To the businessmen on the Commission, it came as something of a surprise to discover that there are still gaps in what we know about health manpower supply and demand. But even so, the facts we do have leave no doubt that the shortage is already critical; that it is likely to get worse before it can even begin to get better. As evidence that it calls for vigorous countermeasures, here are some estimates of what we need — right now:

We could use 70,000 more nurses and 13,500 more dentists. And just to maintain the present ratio between physicians and population, we are soon going to need something like 2,000 more new physicians every year than our medical schools are now turning out.

Shortages are just as serious in other professions. For example: we need something like 8,000 more occupational therapists; 6,000 physical therapists; 2,000 dietitians; 10,000 clinical psychologists; and perhaps 15,000 X-ray technicians. In some of these disciplines, this means two or three times as many people as we actually have on the job today. In mental health along, the shortage of psychiatrists is acute — and there is also an estimated need for over 25,000 nurses, 20,000 attendants, 10,000 psychologists.

Vocational rehabilitation is no better off. One large state, for example, has more than 1,300 actual budgeted professional jobs with money for salaries in hand. But it has only been able to hire 600 qualified people — less than half the number the program needs.

So also in public health. Our official agencies throughout the country have fewer physicians and engineers and research scientists and laboratory personnel than they had 10 years ago. In 1957, nearly one-third of our local health departments were without their own health officer, and there has been no significant improvement. The outlook for the future is even more bleak — the physicians coming into public health as new recruits won't even fill existing vacancies, much less meet our expanding needs. Specifically, in a typical recent year, only 35 physicians were taking graduate work in public health. Nor are students still in medical school attracted to public health. According to several inquiries made in 1958, about three out of four want to specialize — but not more than one in 1,000 names preventive medicine or public health as the field of his first choice.

Though scientific research is supposed to be the basis of all health progress, the personnel pinch is acute even here. When I was Surgeon General of the U. S. Public Health Service in Washington, D. C., I became acutely aware that the biggest bottleneck in research was men, not money alone. Some of those who know most about this problem warn us that research now under way is being frustrated, and that many important new scientific projects require more trained workers than are now available. What's more, medical research is not an end in itself. What profit is there in new discoveries if we do not have the people needed to apply them — to bring the benefits of research within reach of people everywhere?

These figures that I have given are not surmises or prediction — they are facts. They do not overstate the National scope of the problem. But this National shortage is just the sum of local shortages — yours included. In fact, here is a place where the famous slogan is all too appropriate. In health manpower, "as Maine goes, so goes the nation."

You don't have to be told that health needs people here in Maine. I feel some diffidence in discussing your problem and I would feel even more if Mr. Nilson had not sent me the survey of Maine's "Unmet Needs in Medical Care" which was made several years ago under the auspices of the Bingham Associates. On the basis of his own evidence in this report, Dr. Smillie, who headed the Survey, was certainly not overstating Maine's problem when he described health personnel shortages as "acute" — in physicians, nurses, medical technologists, X-ray technicians, hospital attendants and others.

These 1956 findings seem to be confirmed by more recent reports. Only last November, for example, the *Journal of the American Medical Association* pointed out that, in proportion to population, New England has fewer young people preparing for key health professions than the nation as a whole: "New England," the *Journal* says, "is not producing enough doctors and dentists from among its own residents to meet its own needs."

Nursing too has its problems. But here in your

State, I understand there has already been a turn for the better in diploma courses, as well as in the collegiate course at the University of Maine. I hope practical nurse education is also benefiting from this general trend.

This survey of Maine's unmet health needs is an outstanding example of the kind of factfinding advocated by the Commission on Health Careers. And by taking these findings as a base for a realistic attack on your problems, you are demonstrating the Commission's ideas about how facts should be used. Unless it leads to action, factfinding is a costly waste of time — a meaningless and tragic form of self-deception.

But action may fall short, no matter how compelling the facts, unless they are generally accepted. As a case in point, let me return to something I mentioned earlier, the application of knowledge at hand.

Health workers have come to take public acceptance and interest for granted. The assumption — that Americans are health-conscious people — gets very substantial support from a recent public opinion research project. The purpose of the study was to find out what kind of news stories the public wants — and health got top rating. From coast to coast, people — old and young — said health news is what they look for — and want more of — in newspapers and magazines, on TV and radio. They specified interest in medical research — the great attack being made on the killer diseases like cancer and heart disease; advice about taking care of one's own health — weight control and dental care; and child health.

There is no question in my mind that this kind of health news does rate a high priority. However, I find it difficult to account for the fact that — four years after the start of the Salk vaccine program — approximately 50% of the population under 40 had not had the basic three injections and over a third had had no vaccine at all.

Whatever the cause, health people know the alarming results. According to a recent report, there was a 10% increase in poliomyelitis during the year ending March 28, 1959 as compared to the previous year — and a 60% increase in paralytic cases.

According to studies made by the Public Health Service and the National Foundation, this failure to get protection seems to hinge largely on the fact that many of the unprotected are in the hard-to-reach groups often not touched by national news or publicity — people in the lower socio-economic groups and people in the more remote rural areas. Far from contradicting the top priority news-interest in health or the importance of public information and understanding, our failure to get blanket nationwide polio immunization underscores the need for more and better communications. The solution, in addition to requiring more national publicity, needs more coordinated and effective local action, local publicity, and local leadership in an effort to reach the "hard-to-reach."

A campaign must be waged at every cross-roads from coast to coast. As far as Maine is concerned, you will have to pick up the story at this point because you are the local leaders upon whom this polio campaign depends. I am very much interested in its success. I hear that you have been lucky here in Maine — with only a few cases in 1956-57 and an even smaller number last year. But though, so far, you are one of the happy exceptions to the national trend, don't forget that even here the number of paralytic cases was the same in both years. And don't push your luck. This ounce of prevention is worth all the effort it will take. It is in your power to keep up your good record — to forestall future disasters in your State from this crippling and killing disease.

I have no illusions that local action on this scale is an easy job. But I also have no doubts that you can handle it. To take an example from another Federal program in which I was very involved, your response to the Hill-Burton Hospital Survey and Construction Program has been highly creditable. By marshalling State and local resources, you have been able to take advantage of Federal matching help to make up your arrears in hospital construction — expanding existing hospitals and building new ones.

Apparently, too, you have found — as have other states — that more beds and more hospitals aren't much good unless you have enough hospital personnel to go around. Much as I regret it, I was not surprised to read Dr. Curran's comment, in the 1956 survey, that some of your new hospitals were experiencing serious staffing difficulties. I hope that, in one way or another, you have managed to get on top of that immediate health manpower problem. And it is reassuring to know that through community action for Health Careers you are looking — and working — for the future.

Here, as elsewhere, there is a tremendous job to be done if we are to make sure that health has its fair share of the young people who will soon be taking their place in the world of work.

I think you must have made a very good start at bringing Health Careers information within reach of your young people throughout the State. You certainly have great strength in your State Health Careers Committee. Incidentally, I am impressed with the fact that your State Committee members assembled en masse to put on a television panel in behalf of Health Careers. It's never easy to corral so many star performers at one time.

You have leadership; and if the following letter is any evidence, your rank and file workers are equally devoted. This came to the Health Careers office from a public health nurse in one of your more isolated areas — and now I am quoting:

"When I visit the high school, I am often approached by students as to future careers. Many ask about types of health work. I talked with the principal and got his permission to start a Future

Health Career Club. To me, it is a sad situation. Here are these boys and girls who would like a career in health and don't know where to look or whom to consult. It's a small country school with no counselor. I want to help."

This is the great strength of the Health Careers Program — the people who "want to help," who are working for Health Careers from here in New England to the West Coast, and even out in the new States of Alaska and Hawaii. To wrap up this nationwide sweep of local action in a single sentence: there are Health Career committees covering more than 20 States and well over 200 local communities: more than 30 of these committees have produced their own Health Career publications; all State health departments are involved in Health Careers in one way or another; literally thousands of community groups and organizations are in action — to say nothing of "committees of one" like your rural public health nurse. And all of them are providing local Health Careers information and services for teen-agers in their own schools and communities.

Our Health Careers staff tells me that though their information about your activities is probably not complete, your Health Careers program seems very much in line with this general pattern. They have noted particularly the work done by the Maine Tuberculosis Association and its local affiliates, as well as by your health department. We are glad to learn from Mr. Nilson that you are planning to get out your own Health Careers pamphlet. As I just mentioned, a number of such publications have been produced and such local career information always proves to be a great asset.

One rather new development that may interest you is the extent to which state and local groups are following the lead of the Commission on Health Careers in developing factfinding projects. These range from inquiries into school needs for, and utilization of, career information to surveys of present and anticipated job opportunities. The Commission on Health Careers is very much interested in experimental approaches — in ideas that are both imaginative and practical. At the national level, recent activities are helping to stimulate this kind of recruitment and to facilitate the sharing of experience — for example:

In keeping with this "down-to-earth" interest in recruitment, the Commission called a two-day Conference which brought together representatives of 27 national professional societies. In the Conference chairman's words, its main purpose was to exchange recruitment experience and to find new ways of doing a still better job — singly and cooperatively. On the recommendation of this Conference, a second and larger meeting on recruitment is being planned for the near future, with participation by voluntary health agencies as well as professional societies. A similar meeting — this time for public health people — was held during the 1958 Annual Conference of the American Public Health Association. This, too, was so success-

ful that another meeting is being arranged for next year — with the program focus on cooperation with schools and school counseling services. As another means of sharing Health Career ideas, a newsletter, the Health Careers Exchange, is being developed and will be distributed soon.

There is also a new pamphlet — issued by the Public Affairs Committee with Commission endorsement and collaboration. It is titled "What's In Your Future — A Career in Health?" and there are some sample copies here for those who may want to review it. We hope — and believe — you will like it as much as we do. As another project, information on enrollment trends in the health field is being compiled. Covering a cross-section of 14 health professions, this inquiry will provide some revealing "indicators" to the supply of students in the schools from which the health field draws professional personnel.

Looking ahead to this summer, arrangements are being made to provide Health Careers information for participants both in Science Teaching Institutes and also in the new Counseling Institutes being held under the National Defense Education Act. In another special project, the Public Health Service is cooperating in compiling Health Careers information for high school science students in the Summer Institutes which the National Science Foundation is starting this year.

These examples indicate the broadening scope of the Health Careers Program since the establishment of the Commission. They reflect both the impetus provided by the Commission and the widening knowledge that it represents a central source for information and guidance. But even with the enthusiastic teamwork that is carrying the Health Careers effort forward, we cannot look for any quick and easy solution of our health manpower problems. They have been a long time in the making and they will take a long time to solve.

There is a do-it-now urgency in our need for health personnel which sometimes obscures its complexity. Yet I think we need to keep a sense of perspective — to remember that great forces of change are at work — and that many of our current problems, health manpower not excepted, are in fact the by-products of scientific and other progress.

For example: The health sciences themselves have directly contributed to the population increase and to the availability of new health procedures, and thereby have helped to step up the need for more health workers.

Meantime, while all this pressure has been building up *within* the health field, scientific progress in non-health fields has also been making tremendous demands on manpower. The health professions must compete with these other calls for manpower. They have legitimate claims on the limited supply of able young people. These are just some of the forces affecting our health manpower supply. There are many others — I am sure there are many unique ones in this State. You

have the problem of a sparse population with a somewhat disproportionate number of very young, the very old folks, and in the migration of young people from farm to city and sometimes from Maine to other states.

We must think beyond recruitment — to professions. Recruitment isn't much good if professional training is beyond reach.

The fact that there is no medical school in the State highlights this problem. But I suspect that it is only the tip of the iceberg. As one indication that the problem goes much deeper, the state's proportionate representation in the classes in medical schools is at a low ebb. In the last school year, out of a total entering class of just over 8,000 new medical students for the country as a whole only 16 came from Maine. With the exception of one Southwestern state, the proportion of entering students to total population was smaller here — 1.3 per 100,000 — than anywhere else in the country.

In spite of this, it is reassuring — and characteristic of Maine's self-help principles — that your State Government has adopted the Regional Medical and Dental Education Program proposed by the New England Board of Higher Education — and is providing funds to implement your participation.

By coincidence, I have just come across some views on higher education in New England — and on its medical and dental education in particular — by the regional Board's Executive Secretary, Dr. Robert E. Kroepsch. They are in a speech he made just a few weeks ago before the Connecticut Public Health Association. Because I was coming here, I took special interest in his comments; and because he had much to say about educational bottlenecks, I am going to repeat some of his points. Here, then, is how Dr. Kroepsch sizes up the situation for New England as a whole:

With a warning that the New England States must re-examine their responsibilities to education if they are to face the future with confidence, he points out that traditionally and historically they have looked upon college education as a private affair. Up to the end of World War II he thinks the private colleges performed their function with distinction: They supplied about 75% of all undergraduate college instruction. They produced substantially all the area's physicians and dentists, scientists and researchers, specialists in public health and social work, as well as its preachers, scholars, lawyers, and professional people generally.

Thanks to these private schools, New England taxpayers — unlike those in other sections of the country — had to shoulder only a "residual" obligation for higher education — for teachers colleges, technical and maritime schools, agricultural and a few other land-grant institutions.

But in the 1940s the "veterans' bulge" ushered in a new era — with the bulge turning into a steep upward curve and no end in sight. According to new estimates

cited by Dr. Kroepsch, New England's college-age population will increase by 67% in the next 15 years, and a larger proportion of this expanding group will knock on college doors. Since 84% of New England students now get their college training within the region, he believes the problem will have to be solved by New Englanders themselves.

Dr. Kroepsch sees no signs that the existing colleges will be ready for the coming demand. He points out that, with relatively few exceptions, private colleges are planning little or no expansion — and he concludes that there must be a dramatic expansion of *public* higher education if the children now crowding primary and secondary New England schools are to have the same educational opportunities their older brothers and sisters had.

I don't know how you feel about public higher education facilities and not being an educator or a resident of the area, I am not able to agree or disagree with him, except to say that his basic thesis, namely, that more facilities (of some type) are needed is certainly glaringly true.

What makes this even more serious, he says, is that New England has already lost its superiority in terms of a college-trained population — and this in spite of the fact that it is the home of many of the most highly renowned colleges and universities in the world. Times have changed since the days 150 years ago when New England could safely claim the highest concentration of college graduates in the country. Only Massachusetts remains among the top ten states, and it has fallen to eighth place. On the score of students now in college, the record is no better than for college graduates. On this score only two New England states are among the top ten in enrolled students and the other four are so far down the list that Dr. Kroepsch calls it "distressing."

Turning to the health professions, he suggests that the high national and worldwide reputation of New England's schools is a positive disadvantage to local candidates. With the schools wishing to take their pick from among the best students in all parts of the country, the competition for entrance constantly becomes stiffer. Thus, though the medical education produced in New England cannot be excelled anywhere, this superior product, like so many regional specialties in the commercial world, has, in large measure, become a sort of export product.

On top of all this, Dr. Kroepsch points to mounting tuitions as another barrier. At some New England medical schools, it has already reached \$1,500 a year, not including books, fees and board and room, and he thinks it will continue to go up. Vermont, in Dr. Kroepsch's view, is the one New England state where medical education presents a different picture. With the only tax-supported medical school in the region, and therefore, with a relatively low tuition, it has a higher proportion of medical students from Vermont than any other State in the region — and most of them

are a state product as regards training, as well as birth. With seven Vermont medical students per 100,000 population, it is fourth from the top for the nation at large, and the only New England State above the national average. But Vermont is not entirely self-contained. It also produces medical education on an export basis because three out of five students are from out of State, mainly from its New England neighbors.

In dentistry and nursing, the New England Board has brought together evidence of special problems. More educational facilities for dental hygienists, as well as dentists — including a new dental hygiene school in Maine — are urgently recommended. In the nursing field, the Board particularly stresses the need for college and graduate programs to provide training for public health, supervisory and administrative work, and teaching.

More and more accessible schools with lower tuition rates certainly seem essential. But can we assume that improvement here would automatically direct more people into the health professions? I suspect that this may not be the whole answer — and one last example will show you why. This comes from a new study done by the Careers Commission Staff not of medical school students, but of applicants — those who wanted to attend rather than just those who actually were accepted. According to these findings — some States clearly provide much larger numbers of applicants in proportion to population than others. In actual figures, the range is from a high of 17 per 100,000 to a low of $3\frac{1}{2}$ — and it is Maine that has that bottom of the list figure. Of the other New England States, Vermont is highest with 11; the average for these five states is nine.

Here is one dramatic measure of the job your Health Careers Committee has taken on — and of the necessity for it. It leaves no doubt how essential it is to reach all our young people — to give them a chance to go into health work if they want to and have the capacity. This applies not only in Maine, but in many other places. In spite of all our progress, it sometimes seems as if we had hardly scratched the surface. Lack of information, lack of incentive, lack of the motivation that comes from family interest and understanding — if young people are to overcome these handicaps they need all the help we can give them. The odds are heavy, but they are not insurmountable.

For the future, one certainty is that there will be a change. There is no doubt that up to now, this post-war period of transition has laid a heavier hand on you than on some other parts of the country. There are still arrears of progress that have not yet been made up. But here, and everywhere, I think we are moving ahead. And we have just begun.

One of the most encouraging aspects of the entire effort is the growing recognition that the National Health Council's Health Careers Program offers a

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Challenge To Nursing - 1959*

J. A. CURRAN, M.D.**

It is a great pleasure and privilege to be with you today and to join in welcoming this attractive group of graduates into the ranks of professional nursing. I congratulate you graduates on your idealism, devotion and perseverance which has made this great day of achievement possible. The trustees and administration of this hospital, your teachers and your families have cause for great pride and satisfaction in the contribution to the nursing profession which your graduating class of 31 members represents. I am interested to learn that all of you young ladies come from Maine and nearby New Brunswick. It is very pleasing news that all plan to enter careers of bedside nursing; 14 of you right here at the Eastern Maine General Hospital; and seven will return to their home communities to serve in small hospitals where their skills are so urgently needed. That means two thirds of your class will be immediately available to help meet nursing shortages in this state.

In the true sense of Commencement, may this day be only the beginning not only of long lives of service to humanity, but ones in which you will continue a scholarly interest in professional advancement. That will be attained by keeping abreast of the rapid advance of medicine, through day-by-day hospital and community health experiences, by means of postgraduate studies, attendance at meetings of scientific interest, and the regular perusal of your nursing journals.

Although all of you will undoubtedly wish to marry, establish homes, and raise families of your own (I understand almost half of the class is already married or soon will be), I trust that your status as professional nurses will inspire a sense of life-long obligation to the cause of good nursing, and to its welfare and advancement — to the extent that family obligations permit. If you keep up, and progress in your knowledge of nursing during your younger years, I have no doubt as the future years roll by that there will be increasing opportunities for you to participate in various forms of nursing service. No one can predict what the future has in store for us, for good fortune or for ill. Nursing skills are precious assets, which should be conserved and developed as one source of personal and financial security and independence.

Since we are celebrating this year the rounding out of the first century of the modern era of organized profes-

sional nursing education and training, it is wholly appropriate for all friends of nursing in all of its ramifications to join in taking stock of achievements to date, in realigning our forces, and facing as squarely as possible the challenges of the future.

Just five months ago, I had the thrill of visiting the famous old Turkish Army barracks at Scutari on the opposite side of the blue Bosphorus from Istanbul, where Florence Nightingale and her group of Catholic nuns and Church of England nursing sisters dramatized the need to make a fresh start in the preparation of well-trained nurses for the care of the sick and wounded in peacetime as well as in war.

I assume that you members of this graduating class have read the fascinating accounts of the terrible scenes of suffering, incredible filth, lack of sanitation, malnutrition, almost complete breakdown of any standards in the care of patients, and the resultant horrible morbidity and mortality among the British soldiers and sailors returning from the Crimean conflict with the Russians during the years 1854 and 1856.

Out of that catastrophe were born our modern concepts of the true meaning of what is good nursing and the proper training of nurses to provide it. Interestingly, that renaissance came about through the necessity to introduce good "housekeeping" as well as tender, loving nursing care, into our hospitals. We must not forget that Miss Nightingale was not only a great educator but she was equally great as an organizer, administrator, and an expert consultant on hospital design and construction. In spite of all of the appropriate emphasis we are giving to the production of highly qualified bedside nurses, it is important not to lose sight of the fact that without the best in the way of *administrative leadership*, a *smooth, efficient organization*, and *fine, functional facilities*, much of the bedside nursing will be inefficiently applied.

With regard to that famous old two and three story troop barracks at Scutari where modern nursing was born, you will be interested to learn that it still stands practically unchanged from the form in which Miss Nightingale first saw it on her arrival there 100 years ago. It was built in a hollow square with square towers at each of the corners. The old rooms where the Nightingale nurses cared for their patients are now occupied by Turkish soldiers, forty men in rude bunks in each room.

On the trip across the Bosphorus I was accompanied by Mrs. Elaine M. DeCorio, Director of Nursing of the American Hospital at Istanbul, who served as a guide. At the barracks we were greeted by Major Necati Oz-

*Commencement Address to graduating class, School of Nursing, Eastern Maine General Hospital, Bangor, Maine, Thursday, September 10, 1959.

**Senior Consultant, Bingham Associates Fund.

kanec, the Officer of the Day, who led us through the great quadrangle so vividly described in the Nightingale accounts, up the same stone staircase where Florence Nightingale carried her lamp over a century ago, and along a vast corridor to the room on the second floor of the northeast tower which she occupied as office and sleeping quarters, during her struggles with British bureaucracy and her successful efforts to save the lives of the patients. Her achievements are memorialized by a bronze plaque erected by the Turkish authorities and two well-known pictures of Miss Nightingale on the opposite wall. However, the room is not completely a shrine as it might most appropriately be, but is actively used either by a Turkish Army officer or a clerk, for it is equipped with well-used office furniture. There are three windows in the north wall. The major walked to the center one remarking, "This is where Miss Nightingale used to stand and enjoy looking out over the Bosphorus." With his permission I took a picture from that historic vantage point. How much has happened since that great lady stood there and dreamed of what the future might hold in store for professional nursing! She would be surprised and pleased to learn that now after 100 years a Florence Nightingale School of Nursing is to be established in Turkey in her memory.

My visit was during a tour of the Middle East for the World Health Organization covering the first three months of 1959. It was tremendously inspiring to see how cooperative nurse leadership, from the United States, Canada, Britain and the various countries concerned, is pioneering in the founding of new schools and institutes of nursing in Egypt, Lebanon, Iran and Pakistan. For example, in the city of Hyderabad in the interior of West Pakistan there is a fine new nurses' training school and residence located on a brand new 400-acre university campus. Considering this is a Moslem land it was fascinating to learn that the new nurses' training unit is dedicated to a nurse who served the prophet Mohammed in the care of the wounded after one of his sanguinary battles around Medina, and to Florence Nightingale as well! There is a handsome new picture of Miss Nightingale in the beautiful foyer of the school.

Obviously the challenges to nursing today are both national and international in their scope and are basically similar as to fundamentals. The fine group of graduate nurses before us tonight may well ask us what are those basic challenges with which they will have to contend in Maine and elsewhere, during the second century of modern nursing. Quite obviously they are to be found within *hospitals* (general, mental, tubercular and convalescent), in public health, industry, nursing homes, rehabilitation, and last and far from least, administration, teaching and research. We may well ask ourselves to what extent the challenges have been altered over the last century. Certainly today's world of hospitals and systems of patient care have changed almost unbelievably since Florence Nightingale began her

spectacular career — to make nursing a recognized and respected profession. Nonetheless, I suspect that the fundamental challenges we are confronting in 1959 have changed surprisingly little. After all, people remain much the same human beings and are surrounded by much the same kind of pathogenic organisms and other adverse elements in our environment. Some new factors have been introduced to disturb our efforts at homeostasis, it is true, such as the ubiquitous cigarette, the motor car, radio, airplane, and the rapidly increasing percentage of the aged in our population. Yet, just as the Nightingale nurses struggled with all manner of hospital infections in 1854-1856 — so we in 1959; medical, nursing, technical and service staff personnel — have to concentrate our attention on methods to circumvent the deadly staphylococcus aureus and other pyogenic bacteria.

Only a few years ago hospital folk were in danger of falling into the error of forgetting the lessons of history and assuming that the new era of so-called, and, I might say, miscalled, "wonder" sulfa drugs and antibiotics, had banished our age-old enemies in the microscopic world. There was even a tendency in certain quarters to adopt a comfortable attitude that it was no longer necessary to scrub thoroughly in preparation for surgical operations and obstetrical deliveries, or to continue research into the most efficient methods for sterilization of instruments and other operating room materials. All that was needed was an antibiotic "shot" to take care of all infections, anyway!

Now the rising menace of pathogens, resistant to the antibiotics which have been given too promiscuously, has sharply re-emphasized the age-old lesson that there is never any really easy road to the conquest of disease and the preservation of vital health. In hospital practice there can be no substitute for scrupulous cleanliness, and exacting aseptic and antiseptic techniques, for which both doctors and nurses must accept full responsibility. As I am sure you all have observed or heard, the Bingham Associates Fund has been very happy to participate in the educational programs among hospitals in Maine, under the leadership of our consultant, Miss Frances Ginsberg, to attack this renewed threat to the safety of our patients.

As we try to visualize the broad extent of the challenges to medical and nursing services during the years ahead — it is with the realization that they are both *quantitative* and *qualitative*. They are *quantitative* because we must set our educational and training objectives to step up the production of doctors and nurses to care for the needs of an *additional* 3,000,000 people in the United States with each passing year! That means somewhere between 3,000 to 5,000 more doctors and at least twice that many nurses produced each year — *more* than we are graduating to date! That is on the assumption that the population requires a ratio of approximately one doctor and two to three nurses to each 750 people in our population. It is estimated that by

1970 we are going to require a force of 600,000 to 700,000 nurses which means an increase of that extent over the present 450,000 in the country. In addition, we must train about an equal number of practical nurses, aides, and other auxiliaries to round out the necessary complete nursing team.

In meeting this huge *quantitative* challenge, it is quite obvious that the sick population can no longer be expected to carry the entire burden of financing the cost of nurses' training. Whereas in 1941 and '42 when I first visited your hospital the cost per patient day was 5.01, it has increased about 500% over the 18 years since! Even with the rapidly growing extent of Blue Cross and Blue Shield and other medical insurance, patients are strained to the limit to pay for the cost of their medical and nursing care. Hence the education and training costs for nurses can no longer be charged entirely to the hospital patient but must be spread over the entire population, through proportional tuition charges, payments for services where the student partially "earns her way" as she learns, voluntary contributions from friends of the hospital, and support by the taxpayers. This concept has already won considerable acceptance throughout this state in connection with the newly recreated collegiate school at the University of Maine where a grant from the Honorable Frances Payne Bolton through the Bingham Associates Fund to complement tuition receipts, support from this hospital and by the taxpayers have made this new leadership educational project possible. Other examples are the state-supported schools for practical nurses at Waterville and Presque Isle. So far, from the latest figures available, income from sources other than direct hospital contributions are as follows: tuition and fees, 22%; tax funds, 3%; and contributions from philanthropic sources, 1% plus. It is quite obvious that a new and hard look must be taken at the ways and means nurses are to be educated in the hospital basic diploma programs during the years ahead.

In the great *quantitative* challenge of preparing an adequate number of nurses for the future, there is one basis for real optimism as to success in the recruitment of an adequate supply of candidates. As is well known, the birth rate in our population, after dropping to a very low figure during the great depression years, began to rise to its present high level just about 18 years ago. Hence there will be a very large number of students coming out of our high schools during the years just ahead who will become available if we undertake sufficiently vigorous career guidance and recruitment. Certainly members of our medical and nursing professions can cooperate in helping to meet that challenge.

As to *qualitative* challenges, we mean the types of skills required in various phases of nursing service and the special opportunities available to stir nursing ambitions.

Regarding special fields of opportunity, a survey made of nursing careers in Maine a few years ago re-

vealed that half the nurses were working in general hospitals, one quarter were in private practice, and the remainder were distributed among psychiatric and T.B. hospitals, nursing homes, public health work and doctors' offices. Of great concern was the finding that less than one percent were engaged in teaching! Hence, it is not surprising to learn that one of the main causes for the closing of 25 of the 30 nurses' training schools which once existed in Maine was the lack of an adequate supply of teachers!

As recently as 1956, in another survey of the unmet medical needs in this state, Miss Phyllis Caswell, nurse consultant to the Bingham Associates Fund, outlined what she considered the eight outstanding challenges to nursing in Maine. She categorized them as the needs for: (1) establishment of a university level program to educate nursing leadership: head nurses, supervisors and teachers; (2) better nursing follow-up of patients into convalescent and nursing homes and for domiciliary care; (3) preparation of nurses to meet the needs of older patients, for rehabilitation and mental health; (4) public health instruction in the basic diploma hospital training courses; (5) full accreditation of the five diploma programs in the state; (6) establishment of more practical nursing schools; (7) improvement of personnel policies, salary, work week, benefits, etc.; (8) a continuous and extensive recruitment program for nursing students.

Now, three years later, it is encouraging to report that the needed university program has been established, and the Eastern Maine General Hospital is playing a vital part in the achievement. One of the five hospital diploma schools has now achieved full accreditation and the others should follow in the near future. Practical nurse training is now keeping pace with the number of applicants. A third school will be opened as soon as there is a demand for it.

A new model aide program has been initiated at the Rumford Community Hospital with the support of the Ladies Auxiliary of the Hospital, the Oxford Paper Company and the Bingham Associates Fund. Also, a new comprehensive medical care-rehabilitation project is under way in Waterville, centering at the Thayer Hospital, which is aimed to encourage better nursing follow-up and nursing home cooperation in connection with long-term illness and better guidance of older people.

In all of these advances aimed at meeting both the quantitative and qualitative challenges for adequate nursing care of the population, it is encouraging and cheering to observe that the basic *hospital* sponsored diploma programs are now coming in for due recognition. Since these schools have been providing 85% of all of the professional nurses in the country, it is gratifying to learn that at long last the National League for Nursing has recognized this year that the hospital diploma schools merit a real and permanent place in the picture. In a statement published in the "Nursing

Outlook," it was agreed, "in order to assist in maintaining and increasing the number of registered nurses required to meet the expanding demands for nursing services, the NLN believes that educationally sound programs in nursing offered by independent or hospital controlled schools are essential." It went on to add that "the NLN believes that graduates of diploma programs, like other graduate nurses, when exposed to new and complex situations, should be thoroughly oriented to in-service education."

With regard to the qualitative challenges in connection with the preparation of graduate nurses, it seems to me there is danger of confusing the terms "education" and "training." Too often the terms are used as though synonymous. Of course they are not. The point is well illustrated by a story about a small child admitted for the first time to a hospital, who watched the ministrations of a nurse on duty with wide-eyed interest and mounting curiosity. Finally, he burst out, "When are you going to do your tricks?" "Tricks," replied the puzzled nurse, "What do you mean?" "Why," responded the equally puzzled child, "Aren't you a *trained* nurse?"

Too often, I fear, people think of the graduate nurse only as one who is trained in the performance of skillful techniques which she is expected to carry out in more or less rigid fashion after they are ordered by the doctor. Surely the difference between a nurse and a technician is primarily that the former has been *educated* in the fundamental sciences and concepts of disease, enabling her to deal intelligently with illness.

A very discerning young physician whom I asked what he considered the distinguishing attribute of a graduate nurse replied, "I expect her to have some real understanding of disease and of the patient." Doesn't that come very close to the basic and ultimate challenge to graduate nurses? *Nursing* isn't just something one does *to* a patient in the way of procedures or treatments merely in routine fashion — even in the meticulous carrying out of the doctor's orders. It is something done *for* the patient and *with* the patient in intelligent appreciation of the illness and of the patient's reaction to it.

A very great physician in Boston some years ago, Dr. Francis Peabody, once phrased this concept in counseling medical student clerks by saying, "The first principle in the care of the patient is care *for* the patient." Quite obviously care *for* a patient goes much farther than an emotional feeling of sympathy. To be effective, it must include intelligent understanding. For the graduate nurse it is crucially important that she distinguish between the implications of her *education* and her *training*. Training can mean nothing more than unthinking obedience to command, according to the Pavlovian concept of the conditioned reflex and automatic response to stimulus. Someone has characterized the difference as saying, "Training is to *do*, education is to *be*." For the graduate nurse, "to be"

means inevitably that she *should* and *must* assume to varying degrees the role of leadership. Beginning as a general duty nurse, there is responsibility for the supervision and coordination of less well-trained personnel.

Some years ago I was asked to address a class of practical nurses at the completion of their course. In anticipation of the assignment, I asked their director what the limitations of their duties were considered to be. To my surprise, she replied, "The only limits will be those set by the particular hospital or graduate nurse or doctor where they will be employed. In some instances they will be expected to serve like graduate nurses, while in other places they will be treated like aides or ward maids."

Quite obviously, mere skills in the performance of techniques or procedures, while of basic importance, are not the final answers in distinguishing registered nurses from their auxiliary helpers.

As one goes among the hospitals of Maine, or those in other parts of the country as I am doing constantly in connection with my consulting work, one of the most striking challenges of all in nursing and medicine is the rapidly growing number of aged patients in our wards and private rooms. Clark Tibbetts, in speaking of "social change, aging and public health nursing," noted "Accommodating ourselves to the aging of our population is a major challenge today. Nurses are in a powerful position to create a need for 'wellness,' rather than a need for *illness* in older citizens. Each year now there is a net increase of 400,000 older persons, which means that the younger people of today will see the older population double during their lifetime and eventually will become a part of it." "In the past, aggravated illness in older people hastened their decline and encouraged invalidism" and tended to "consign them to helplessness once they became chronically ill. Thousands who are rusting in mental hospitals, public institutions, nursing homes and in their own homes today, are a reflection of this ignorance."

One of the hardest lessons modern nurses have to learn is that *tender loving care* of *older patients* is not necessarily the *best care* if it results in encouraging them to become utterly dependent and helpless. Again, true *education* of the graduate nurse prepares her to reverse the usual process of responding to the patients' requests for care by simply *waiting* on them. Instead, by encouraging, stimulating and insisting upon the patients' becoming increasingly independent, *doing for themselves*, a real degree of rehabilitation is attained. In the words of Lucille Petrie Leone, we must learn "how to reconcile the difference between the kind of nursing care patients expect, and the kind of care nurses think the patients should have, or expect to give them." Such a nurse learns the valuable lesson of *listening*, rather than always ordering or directing. She learns to treat patients as *persons* and not as *things*. That truly is the ultimate challenge.

In a commencement address the speaker is always tempted to try to play the role of prophet as though anyone can really confidently predict what the future has in store for us. Nonetheless, through careful study of history, through intelligent use of the brains which God has given us, we need not blindly blunder into the future. We can with considerable confidence observe trends and predict where they will lead us. From experience, from research, through carefully worked out hypotheses and plans, we should be able with confidence to meet the challenges of the future no matter what they may be. We must have *faith* in a better world ahead and that we can help to make it one of *true peace* and prosperity.

I am reminded of a story told of a visitor to Washington, D. C. who while riding in a taxicab noticed an inscription on a public building which read: "The past is but a prelude." "Do you know what that means?," he asked the cab driver. "Sure I do," came the reply. "It means you ain't seen nothing yet!"

I am sure this graduating class will see advances during its professional lifetime that will make the impressive ones mentioned during my address pale by comparison. I am glad to join in wishing this graduating class Godspeed in the great adventures which are before each one of you in the various fields of professional nursing to which you have dedicated your idealism, your devotion and your best efforts.

HEALTH MANPOWER NEEDS OF THE NATION — *Continued from page 388*

framework for national action — a framework which the Commission has strengthened and expanded. A solid structure has been built for assured cooperation by literally hundreds of diverse groups. There is continuing nationwide action to meet the universally recognized need for "more hands for health." There is increasing agreement on the urgent necessity to interest young people in Health Careers, to conserve existing professional manpower, to find more efficient ways of providing health services, and, in general, to focus all existing forces — public, voluntary and professional — on the task ahead in Health Careers.

I think the Commission might define that task as

a "moving target" — because each step we take forward, each gain we make, reveals more steps and new goals. We need to make sure that each new step — each job we undertake — is clearly identified and within reach. All of us want and need to know where we're going. All of us want and need the satisfaction that comes with getting a job done — even though we know too that the "moving target" is still leading us into the future. I have no doubt about your ultimate success, because you have organized State programs along the general lines of the National Program and are tackling with vigor the problems that face you. I offer you my congratulations and best wishes.



Acute Necrotizing Hemorrhagic Encephalopathy

With Vasculitis And Involvement Of White Matter

CHARLES W. STEELE, M.D.,** and KENNETH A. HALING, M.D.***

Acute necrotizing hemorrhagic encephalopathy is a disorder which has been described infrequently in the American and English literature. Hurst¹ described two such cases in 1941. The chief clinical feature was a rapid abrogation of the high cerebral functions accompanied by headache, vomiting, slight pyrexia and leukocytosis. At necropsy the brain disclosed highly hemorrhagic and edematous condition localized chiefly in the white matter of one cerebral hemisphere. Microscopic examination subsequently revealed much more widespread lesions of another kind which existed independently of, as well as in association with, the hemorrhages and edema noted grossly. These lesions included extensive damage to the vascular, perivascular and intervascular tissues without clearcut thrombosis of vessels.

Henson and Russell² reported a case of Acute Hemorrhagic Leucoencephalitis in a 21-year-old male. This was a young adult in whom febrile attack of unknown etiology was followed by acute encephalitis and death. The lesions were confined to the white matter and were characterized by perivascular foci in which hemorrhage or demyelination were found, either separately or in combination.

In the autumn of 1946, Adams, Commermeyer, and Denny-Brown³ examined anatomically four cases in which there was vascular damage of a characteristic type consisting of widespread, necrotizing hemorrhagic lesions in multiple and confluent foci in the cerebral white matter, and in the brain stem in one instance. The symptomatology had been remarkably uniform with the outstanding features of the illness having been: a) ill-defined prodromal symptoms of a respiratory infection lasting several days and followed by b) high fever and neutrophilic leucocytosis, c) stiff neck and neutrophilic leucocytosis in the cerebrospinal fluid, d) mental confusion, stupor or coma, convulsions and paralysis in the form of hemiplegia or quadriplegia. The symptoms were acute in onset and the course rapidly progressive, ending in death. This disease in both its clinical and pathological aspects was considered by the authors to be unique, bearing no close resemblance to

any of the more common virus or bacterial infections of the nervous system.

Adams³ and his associates also included an extensive review of the literature which went back through the period from 1881 to 1946. One of the earliest reported cases of this unusual disease was described by Leyden⁴ and quoted in a report by Wernicke.⁵ This was a young man who died after a four day illness with symptoms of anarthria, paralysis of one arm and both legs, paresthesia, incontinence of sphincters and with necropsy findings of multiple foci of necrosis and petechial hemorrhages in the pons and medulla.

Cavanagh⁶ reported the clinical and pathological findings in a patient who developed encephalopathy following the therapeutic administration of streptomycin and para-aminosalicylic acid (P.A.S.). A necropsy performed two days after death showed acute hemorrhagic leuco-encephalitis, bronchopneumonia, chronic cavitating pulmonary tuberculosis and mild exfoliative dermatitis. The lesions described in the brain were considered to be the result of obstructive changes in small blood vessels both in the grey and in the white matter. The clinical features that preceded the symptoms of cerebral catastrophe suggested to the author that the patient was hypersensitive to one or the other of the drugs administered. The relationship to sulphonamide and arsphenamine encephalopathy were briefly discussed.

The sparsity of reports in the American literature prior to 1955 of proven examples of Acute Necrotizing Hemorrhagic Encephalopathy would seem to warrant publication of the following clinical case report and the detailed findings in the central nervous system disclosed by necropsy at the New England Deaconess Hospital.

A Case Report — E. B., Male, age 45, CMGH. (Autopsy Report 157256 — NEDH.)

A 45-year-old, white, married, milk-route delivery man and dairy operator was admitted to the Central Maine General Hospital on November 1, 1954, as an anterior poliomyelitis suspect. Nine days prior to admission, he had had symptoms of an upper respiratory infection. Details concerning the exact nature and extent of this acute respiratory tract disorder were not obtained.

About seven days later this patient performed his usual early morning duties of delivering milk but late in the morning or early in the afternoon, he returned home complaining of headache, nausea and vomiting.

*From the Medical Service, Central Maine General Hospital, Lewiston, Maine.

**Senior Physician and Cardiologist.

***Medical Resident Physician (1954).

He remained in bed at home for the remainder of that day with these signs and symptoms persisting, and with the headache increasing in intensity.

The following day, which was one day prior to admission to the hospital, he remained at home in bed with nausea, vomiting and headache continuing. In addition, his wife noted that he was drowsy but arousable, that he had difficulty in swallowing, and a disturbance in speech which, from her description, represented the beginning of aphasia. He required support when getting up to go to the bathroom. In the afternoon he was seen by his family physician who gave him an injection after which the vomiting ceased.

By the third morning, his condition had worsened, stupor was greater and there was weakness of both the right arm and the right leg. He was admitted to the Central Maine General Hospital by ambulance early on this afternoon.

PAST HISTORY

This man had a subtotal thyroidectomy on August 6, 1954, at the New England Baptist Hospital after a one-year history of goitre, nervousness, restlessness and intolerance to hot weather. He had been treated preoperatively with propylthiouracil and idone. The surgical pathological diagnosis was primary hyperplasia with late involution.

There was also an intermittent history of burning epigastric pain about two hours after meals, relieved by food or milk. An upper gastrointestinal x-ray study done in August, 1954, showed a deformity of the duodenal cap and a diagnosis was made of duodenal ulcer. He was placed on an ulcer diet and did well postoperatively until his present illness began on October 30, 1954.

The only other item of possible interest in the history is a report on the Central Maine General Hospital admission history of November 1, 1954, to the effect that this man had complained to his family of a right arm weakness over a period of several weeks. No further details about this right arm difficulty were obtained.

Physical examination on admission revealed a comparatively unresponsive patient with stertorous breathing and with profuse salivation. The pupils were contracted and reacted sluggishly to light. A right rectus muscle palsy seemed to be present and there was an absence of a corneal reflex on the right. He had a right facial asymmetry and his tongue deviated toward the right. The soft palate was paralyzed and a right hemiparesis was present with total loss of pin-prick perception over the entire right half of the body. A positive Babinsky reflex was obtained on the right along with hyperactive deep tendon reflexes on the same side. Superficial reflexes were absent on the right. Blood pressure was 118/78.

On admission the white blood count was 10,400 with a differential count of 57% polymorphonuclears and 13% stabs. Lumbar puncture was done and showed a

normal pressure and clear fluid but 139 polys and 11 lymphocytes were present per cubic millimeters and the total protein was 160 mgs, percent. X-rays of the skull and chest were negative.

By the second hospital day, he had become deeply comatous and had started to run a low grade fever. He was transferred to Boston for possible neurosurgical intervention as a brain tumor suspect.

Upon admission to the New England Deaconess Hospital in the evening of the fourth day of his acute central nervous system illness, the patient was found to be deeply comatous. He responded only by the slightest withdrawal of the upper extremities to very painful stimuli. Fundoscopic examination was entirely normal. The neck was supple, tendon reflexes were 1 to 2 plus and symmetrical but there was no definite response on plantar stimulation. His body temperature was slightly over 100° F.

A lumbar puncture performed soon after this admission showed an initial pressure of 240 millimeters of water and the fluid was clear. The sugar content was 85 milligrams per cent and the total protein content was 260 milligrams per cent. The cell count revealed 2 white cells and 34 red blood cells per cubic millimeter. This spinal fluid was not indicative of a bacterial meningeal infection. The clinical diagnosis at the New England Deaconess Hospital was "necrotizing encephalopathy." Neurosurgical diagnostic studies were withheld and general supportive treatment carried out. The patient's condition remained essentially unchanged over the next 24 hours when he died rather suddenly.

Through the courtesy of Dr. Shields Warren and his associates, we were favored with a complete necropsy report and clinical pathological discussion, as well as generous copies of the microscopical preparations from this case. From this material it is quite apparent that except for the changes in the central nervous system, there is no significant pathology in any of the other parenchymatous organs. The lungs showed a moderate bullous emphysema with chronic bronchitis, congestion and edema. The first portion of the duodenum presents a small chronic peptic ulcer 3-4 mms. in diameter, about which there is some scarring, with adhesions to the head of the pancreas. There was a minimal degree of general arteriosclerosis without any particular involvement of the circle of Willis. Because of the peculiar and unusual nature of this disease the complete description of the brain is included herewith as described by Dr. Warren and his associates.

"BRAIN: 1420 gms. A moderate amount of clear meningeal fluid is present. The great dural and venous sinuses are negative. The arteries have thin, pliable walls and are patent throughout. The overall brain shape is normal, but the gyri are markedly flattened with deep, narrow sulci. The uncus bilaterally is slightly herniated through the tentorium. The cerebellum is similarly herniated into the foramen magnum. The meninges are thin, membranous and transparent.

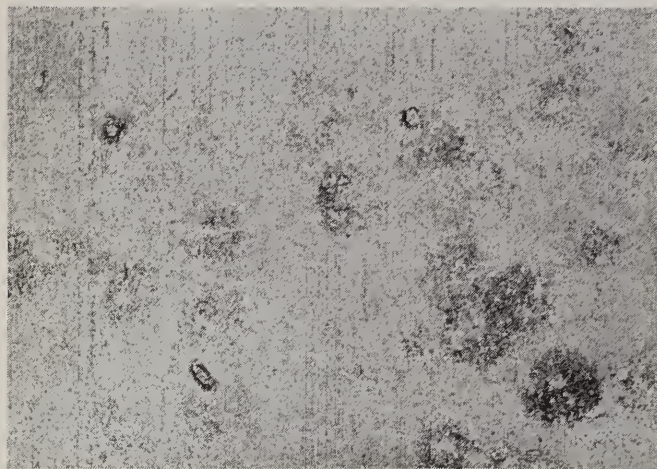


FIG. 1 Left parietal area, showing perivascular focal necrosis and petechiae. Walls of three small arterioles infiltrated with fibrin. Rather diffuse vacuolization and demyelination. Hematoxylin and eosin. X 80

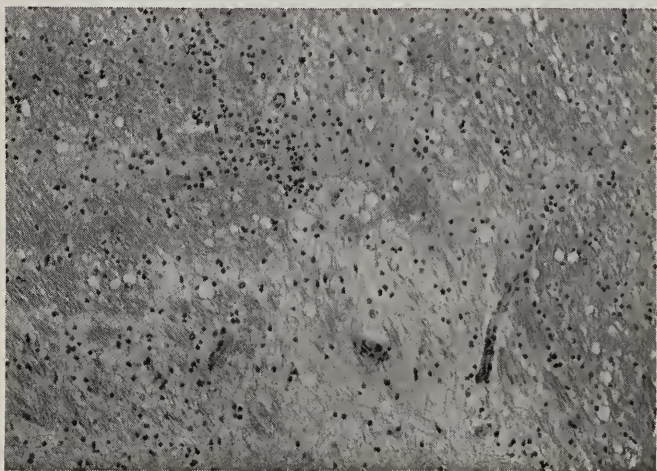


FIG. 2 Thalamus and margin of internal capsule, with extensive edema, vacuolization and focal necrosis, and a diffuse, thin infiltration with neutrophils. Hematoxylin and eosin. X 200

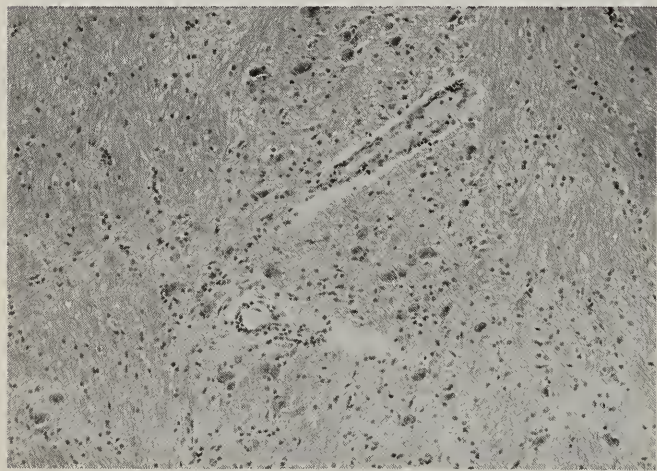


FIG. 3 Focal acute arteritis with neutrophilic infiltration and surrounding perivascular necrosis and neuronophagia. Pons. Hematoxylin and eosin. X 160

The centrum semi-ovale of both cerebral hemispheres contain numerous petechiae, much more marked in the left hemisphere. The white matter in these areas is soft, pale gray, but the petechiae are not confluent. The most marked involvement is in the minor semi-oval center on the left, but the change includes the internal and external capsules and the splenium of the corpus callosum. A focus is distinct at the junction of the anterior and posterior horns of the right internal capsule. The adjacent cortical gray matter is generally not involved, nor are the basal ganglia and thalamus, thus presenting an abrupt termination of the petechiae. However, in the cortex of the parietal region on the superior surface, the cortical architecture is obscured and the gray matter is pale gray-white similar to the involved white matter, but with hemorrhages. The ventricles and aqueduct have smooth linings and are compressed, but not occluded by the soft, bulging tissue. The mid-brain exhibits a slight degree of the change in color but has no petechiae. The pons itself appears intact, but at the origins of the middle cerebellar peduncles and extending out into the cerebellum are multiple petechiae in soft gray tissue as seen in the cerebrum. The dentate nuclei are blurred but not effaced and the gray matter of the cerebellum shows no changes. The medulla bulges and has an architecture blurred by a slight degree of the gray change. The upper cervical spinal cord is negative. A section of thoracic spinal cord has a normal architecture. Pituitary is of normal shape, is firm, and weight 0.6 gm.

"Microscopically, the right motor and sensory cortex maintains the normal general architecture, but the white matter has an unusually reticulated fibril pattern in which are small clear vacuoles ranging up to about 25 microns in diameter. (Fig. 1) Gli appears unchanged. The only changes in the cortical neurons are scant and peripherally placed Nissl substance. A general increase in microglia and possibly gray matter astrocytes is apparent. Inconstant vascular congestion involves both gray and white matter without cellular response. Meninges are negative. Right olfactory cortex has similar white matter vacuolation and focal congestion. The right calcarine fissure and adjacent gyri show apparent gliosis similar to that of the motor and sensory cortex and with Nissl-poor neurons. Congestion and white matter vacuolation are more marked. Several sections of the left parietal region show perivascular to diffuse thin polymorphonuclear infiltration of the white matter, small acidophilic areas of necrosis, most often perivascular and associated with small hemorrhages, and marked vacuolation. Around and in the walls of some small vessels is fibrin and the endothelial cells are often swollen. The adjacent cortex has an occasional vessel involved and focally very slight changes in the supportive tissue. Although in general, the cortical gray matter is spared or only slightly involved, both lentiform nuclei, both thalami and the caudates are involved. The change is of the same character with no relation-

ship to fairly well retained neurons. Markedly involved is the left lentiform, with extensive edema, necrosis and polymorphonuclear infiltration. (Fig. 2). The internal capsules are markedly involved with large vacuoles and numerous foamy macrophages, the latter being also found in the adjacent lentiform nuclei. The white matter of the uncus is slightly involved. A section through the optic chiasma, supra-optic nuclei, mammillary body, hypothalamus and mid-brain shows a generally intact architecture with slight involvement of the fiber areas.

Ependyma in the several areas appears intact. Choroid plexus shows a fibrinoid stromal change without cellular reaction. Mid-brain shows vacuolation, foci of foamy reaction and some peri-vascular reaction. The substantia nigra is relatively spared. In the pons, (Fig. 3) the predominant aspect is peri-vascular foamy macrophages with necrosis but with some of the other types of the process present, most markedly in tract areas but involving the pontine nuclei also. The white matter of the cerebellum, including the dentate nucleus, is diffusely involved while the cortex is nearly intact. The most distinct changes in the medulla are in the floor of the fourth ventricle. Sections of cervical and lower thoracic spinal cord are generally negative, including attached nerve roots. Scattered corpora amylacea are present mainly in the lower brain and spinal cord. Meningeal vessels are slightly congested but without cellular meningeal reaction. A Sudan IV stain of the parietal area shows tiny globules of free fat, most distinct in perivascular areas. Phosphotungstic acid hematoxylin stains on the most severely involved regions show thickening and beading of fibrils with distortion around vacuoles. Gram-Weigert stains show no organisms.

PITUITARY: Slight congestion throughout with focal fibrosis of the anterior lobe. On the superior surface, a few ill-defined foci of polymorphonuclear leukocytes are present in the fibrous tissue. Small focus of more pleomorphic cells is in the anterior lobe."

DISCUSSION

"This is the case of a middle-aged male who died of acute necrotizing hemorrhagic encephalopathy approximately four days after the clinical onset. The fulminating course starting with headache, nausea and vomiting, progressing into difficult speech, weakness, and finally coma is fairly characteristic of this type of encephalitis, although diagnosed with difficulty in the early stages. The history of an upper respiratory infection in the two months preceding the onset of the disease is found in 50 to 75% of the cases reviewed in the literature but is of questionable significance in view of the wide variation in time relationship, the heterogeneous group of respiratory infections and the frequency of upper respiratory complaints in the general population. The granulocytosis and low fever are characteristic. The spinal fluid protein in this case is the highest reported in this disease. The absence of increased leukocytes in the

spinal fluid in the Boston admission is uncommon, but a previous specimen taken at the Central Maine General Hospital is said to have shown approximately 150 wbc/cu. mm. The brain findings in the present case can be summarized as an asymmetric, focal, necrotizing process, predominantly peri-vascular, with multiple peri-vascular hemorrhages, focal to diffuse polymorphonuclear infiltration and demyelination. It involves most markedly the centrum semi-ovale and the lentiform nuclei, but includes the brain stem and the cerebral cortex. The histologic changes are nearly identical to the cases of Henson and Russell² and Hurst,¹ termed Acute hemorrhagic leuko-encephalitis, although their cases had less involvement of basal ganglia. There is not the extensive gray matter involvement of the so-called post-infectious encephalitides nor the small thrombi often seen in them and some other types. The process is not a primary neuronal degeneration as in the viral group, similar to poliomyelitis. The necrosis and diffuse polymorphonuclear infiltrate and asymmetry exclude purpura. The cases of Adams, Cammermeyer and Denny-Brown³ differ clinically in the presence of high fever, neutrophilic leukocytosis in spinal fluid, meningismus and convulsions. They differ pathologically mainly in degree, fibrin impregnation and necrosis of vessel walls being prominent, the meninges being involved in all their cases and there being an absence of glial response. However, the general character is similar to the cases of 'acute hemorrhagic leuko-encephalitis.' The name used is preferable to 'leuko-encephalitis' because the disease is not strictly limited to white matter. No etiology has been demonstrated in the cases reported. Because of the prominence of myelin degeneration, it has been called the acute phase or type of the demyelinating diseases. It has been associated with allergic or hypersensitivity reactions, as reported by Cavanaugh⁶ for which there is no known evidence in the present case. Organisms have not been isolated, although adequate studies, especially viral studies, were not done in most cases. A *Staphylococcus aureus* was grown from the brain in this case but on the basis of present evidence is considered not to be related to the encephalitis because sections show no organisms; the known staphylococcal encephalitis is unlike this, and the growth was scant. A similar organism was found in one of the cases of Adams, Cammermeyer and Denny-Brown.³ No evidence is available for any relationship between the pulmonary asbestosis, duodenal ulcer or the recent thyroidectomy and the encephalitis. No history of arsenic poisoning is available, a somewhat similar encephalitis having been seen following the use of arsphenamine. The other lesions of arsenic poisoning are absent."

SUMMARY

The clinical and pathological findings in a 45-year-old male who died of acute hemorrhagic encephalitis four days after onset of symptoms, are described.

Of unknown etiology, the gross and microscopical

findings consist of multiple petechiae, swelling and focal softening of the brain with striking microscopical changes consistent with the destructive neuropathological pattern accepted for this disease entity by several authors.

It is suggested that the term "leuko-encephalitis" be replaced by "acute hemorrhagic encephalitis" as in many instances the lesions are not strictly limited to the white matter.

ACKNOWLEDGMENT

Our thanks are due Edwin F. Lang, Jr., M.D., Department of Neurosurgery, Lahey Clinic, Boston, Massachusetts, for the fine clinical summary provided us from the New England Deaconess Hospital.

The post-mortem examination was performed at the New England Deaconess Hospital, Boston, Massachusetts; and the authors are especially indebted to Shields Warren, M.D., Pathologist to the hospital, and to his associates for a copy of the complete pathological report with their pertinent discussion and for prepared microscopical sections of the histological material.

The authors gratefully acknowledge the professional and technical assistance of Charles F. Branch, M.D., Pathologist at the Central Maine General Hospital, Lewiston, Maine, who selected the histological material for the illustrations and assisted with a consolidation of the pathological report.

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Convulsions In Children

Children suffering from convulsive disorders may now obtain a complete diagnostic workup at the National Children's Rehabilitation Center in Leesburg, Virginia.

In announcing the new service, Dr. Charles Kram, Center director, said it was launched in an attempt to make it possible for children to obtain a complete diagnostic study in one facility where reports on the numerous examinations can be pulled together and a course of future treatment can be developed. The new service is open to children between seven and eighteen years old from all parts of the country.

The fee for the service will be determined by what each family can afford to pay. The remainder of the cost will be assumed by the Federal Association for Epilepsy, a charitable non-profit organization with headquarters (at 1729 F Street, N.W.) in nearby Washington, D. C. Applications for the service can be made by parents or referring physicians by writing to the Office of Admissions, National Children's Rehabilitation Center, Leesburg, Virginia.

The Journal of the Maine Medical Association

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Across The Desk

Interns Are Chosen For Military Deferment

The Pentagon has sent notification to 947 hospital interns who have been selected for deferment from military service while they undergo residency training beginning next July. The number is well ahead of the quota of 871, though up to 10 days before the deadline for applications only 700 had submitted the forms necessary for residency deferment. In all, 1,553 applications were received by the time the September 15 deadline arrived, more than 700 of them coming in the last three days.

As anticipated, there were more applicants than spaces in surgery, internal medicine, obstetrics and pediatrics. There was not a single check mark opposite "preventive medicine," for which Army, Navy and Air Force had sought 46 appointees. There was only one each in occupational medicine and physical medicine.

NSF Seeks Applicants For 1960 Fellowships

The National Science Foundation will accept until December 22 applications for postdoctoral fellowships to be awarded next March. These are in medicine, biology, and psychology (other than clinical), as well as in the physical and social sciences. The annual stipend is \$4,500, with dependency allowances for married fellows. Studies may be taken at American or foreign institutions. The forms are obtainable from National Academy of Sciences, 2101 Constitution Ave., NW, Washington 25, D.C.

NSF Director Alan T. Waterman has announced 35 postdoctoral fellowship awards. Eighteen of the successful candidates are taking their work in U.S. institutions and 17 in universities and institutes in Germany, France, Switzerland, England, Italy, British West Africa and New Zealand. Twelve of the appointees are Californians. Eleven of the fellowship awards are in medicine, biochemistry, biophysics or one of the other life sciences.

FTC Arrests Claims For Enuresis Relief Device

The Federal Trade Commission has ordered a Los Angeles company to stop advertising that a device it sells ("Enurtone") will stop all cases of bed-wetting. In substance, the FTC ruling upholds a decision returned last February by one of its hearing examiners.

"It (enuresis) has for centuries plagued most of the inhabitants of most of the nations of the world," said the Commission's ruling. "The respondents in mistaken self-confidence misrepresented in their advertising that they had the problem whipped. It is our conclusion, based on the record before us, that they did 'but strut in pride and vaunt their empty claims.'"

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
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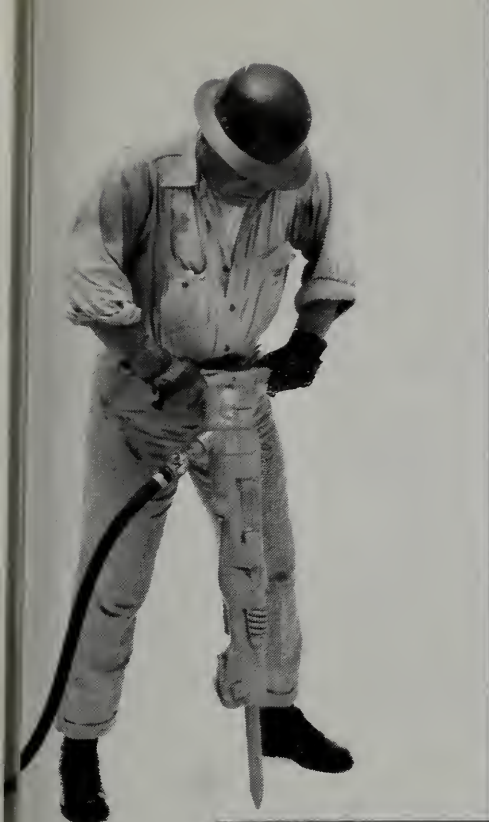
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1. Innerfield, I.: Clinical report cited with permission
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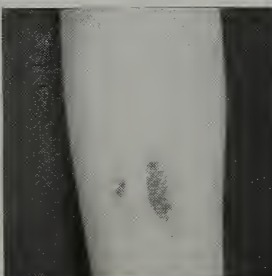
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**INFECTED
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marked reversal
in 3 days...
returned
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THROMBOPHLEBITIS
back on his feet
in a week after
recurrent episode¹



**REFRACTORY
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normal routine
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for his own benefit rather than that of the organization, then he is entitled to deduct the costs as business expenses. This is the essence of a recent ruling by the Internal Revenue Service.

Delegates to county, state and national meetings of medical associations are among those affected by the ruling. It notes that if *both* organizational interests *and* individual interests are involved, a proper allocation should be made in accordance with Section 162 of the Internal Revenue Code of 1954.

Hill-Burton Projects Near \$4 Billion Mark

The latest monthly report by USPHS reveals that up to August 31, 1959, the total estimated cost of Hill-Burton hospital projects since the program's inception in 1946 was \$3,973,591,569. Of this amount, the Federal share was \$1,219,202,569. Cumulatively the program includes 4,659 projects, of which 3,253 are completed and in operation, 1,180 under construction and 226 in preliminary stages.

The grant approvals in August ranged from \$10,000 to help finance a small health center in St. Stephen, South Carolina to \$278,826 for the diagnostic and treatment unit under construction at Woman's Medical College in Philadelphia. Also on the August approval list was a rehabilitation center in Little Rock, Arkansas. All but \$45,000 of its estimated cost of \$135,000 to be borne by Hill-Burton grant funds.

In the first nine months of 1959, *public* hospital and institutional construction increased 15 per cent over the same period of 1958, while the estimated value of *private* projects of the same classification declined by 7 per cent.

Dogs Catch Mumps From Children

When Johnny has the mumps, Fido better stay away. He may catch them, too.

Two cases of mumps in dogs were reported in the (September) *Journal of Diseases of Children*, an American Medical Association publication.

The transmission of mumps in animals other than man or monkeys has previously been considered to be rather improbable and little has been reported on its appearance in other animals, the report said.

The dogs, pets of two different families, were a six-month-old dachshund and a three-month-old Boston terrier. They developed mumps after being in contact with family members who had the disease. The dogs were allowed upon the beds of the patients during their illness and convalescence.

The dachshund died a few days after he became sick, but the terrier recovered within 14 days.

Standard laboratory tests revealed the presence of mumps virus in the saliva of both dogs, who displayed the usual symptoms of mumps — swollen parotid glands and difficulty in swallowing.

The report was made by Frank Noice, Ph.D., F. M. Bolin, D.V.M., and D. F. Eveleth, Ph.D., D.V.M., of the department of veterinary science, North Dakota Agricultural College, Fargo.

New Tooth Decay Preventive Technique Suggested

A slight change in table etiquette might be one way to fight tooth decay, a California dentist has suggested.

Tooth decay is not a steady degenerative process but rather a series of short "commando raids" lasting only 20 to 30 minutes and is generated by the fermentable sugars in food being eaten, according to Walter Drozdiak, D.D.S., San Jose.

If brushing or rinsing the teeth is delayed longer than 30 minutes after eating, little or no preventive effect will occur and "one might just as well forget about it altogether, which is what most of us do," he said.

Therefore, Dr. Drozdiak suggests that the mouth be rinsed right at the table. The idea is to wash away as much as possible the elements that cause decay — the acids and sugars — before the process of decay can begin.

Taking a sip of water after the meal — or even at times during the meal — and swishing it around in the mouth for a few seconds before swallowing need not attract attention and can be done without inconvenience, he said.

Writing in the (September) *Today's Health*, an American Medical Association publication, Dr. Drozdiak noted that forming such a habit may take some effort, but it is well worth it. The teeth are the only part of the body which cannot heal or repair themselves after damage has been done.

In addition, decay does not ever start from within. It always begins on the outside of the teeth and arises from decay-causing conditions surrounding the teeth.

Teeth should be brushed after every meal and the brushing should do more than just remove loose debris and stains from the teeth. It should ideally remove from the teeth all adhering deposits of bacteria and tartar, and it should dislodge foreign matter trapped between the teeth and gums.

Dr. Drozdiak recommends that teeth — like pots and pans — should be checked after cleaning to see that they are really clean.

First Aid For Spinal Cord Injuries Explained

All injured persons who are unconscious or who complain of back or neck pain should be treated as though there were an injury to the spinal cord, according to an Indiana physician.

With careful treatment, more severe damage to the spinal cord may be avoided, Dr. Leslie W. Freeman, Indianapolis, wrote in a guest editorial in the (September 5) *Journal of the American Medical Association*.

A surprising degree of function can be attained after

severe spinal cord injury, he said, but it is frequently the early handling of the patient that determines the ultimate outcome.

When a person is injured, he is usually first handled by a person untrained in medicine, and "it is amazing" how frequently they respond "instinctively toward proper handling," Dr. Freeman said.

However, he offered some suggestions for proper handling of the patient with a back or neck injury. The patient should be left unmoved until a physician arrives.

Then when he is moved, he should be moved "in one piece" without change in the vertebral alignment and never in a sitting or semireclining position.

If the patient can move his hands but not his legs, the spinal cord injury is below the neck. If he cannot move his hands, the injury is in the neck region, and the neck and head must be kept in perfect alignment with the body.

If the injury is below the neck enough persons must be present to lift the patient in such a way that the spinal alignment is not changed, and he should be placed on a stretcher (which might have to be improvised of boards) fully extended with the face down, Dr. Freeman said.

When the injury is in the neck area, the most convenient method for immobilizing the head is to wrap a tapered roll of heavy cloth around the neck until the bundle comes to the jutting end of the chin. The patient should be transported in a face-up position to facilitate breathing.

When the patient is being moved, someone should keep him from shifting and rolling about.

Physician Urges Better Medico-Legal Relations

Revision of the law to keep pace with scientific and medical progress was called for today by a California specialist in legal medicine.

Writing in the (October 10) *Journal of the American Medical Association*, Dr. LeMoyne Snyder, Paradise, California, said, "In large measure our laws continue to be hostile to medical jurisprudence.

"Britain during the 19th century made great advances in this field and established chairs of legal medicine in all of its leading medical schools. However, in the United States, in only a few places have the states yet made any demand for competent medical experts to come to the aid of the law."

He was especially critical of the coroner system, which has survived almost unchanged from the English monarchy of the Middle Ages before the days of the Magna Charta and the crusades. Coroners rarely possess either medical or legal knowledge, "which would seem to be a basic requirement," he said.

A part of this system is the outmoded coroner's inquest — a tribunal in which a jury of six persons is charged with the determination of the cause of the death and naming of the person responsible.

"Generally the first six persons on the nearest park bench are chosen and they take a quick glance at the remains through an open door and listen to what evidence the coroner has at hand," he said. "This procedure seems to be founded on the theory that ignorance multiplied by six equals intelligence."

Too many other purely scientific matters are being decided by public forums and political processes, he continued. For instance, a city wants to improve the health of its people by adding fluorine to its water supply. This is a question which has long since passed from the realm of scientific dispute, yet the matter is generally decided on the basis of letters to the editors.

Dr. Snyder noted that some advances are being made. Some states have instigated the medical examiner system in place of the coroner system. Psychiatry is having an effect on law. The 100-year-old test for sanity — that at the moment of the crime, the accused had a sufficient degree of reason to know he was doing an act that was wrong — already has been replaced in New Hampshire and the District of Columbia. In 1954 the United States Court of Appeals for the District of Columbia ruled "that the accused is not criminally responsible if the unlawful act was the product of mental disease or mental defect."

All of the multiplicity of branches of scientific medicine are advancing at a headlong rate. Diagnostic and surgical procedures which are commonplace were undreamed of only 10 years ago.

"Slowly but surely the laws are being molded to make use of this vast expanse of scientific knowledge in the administration of justice," Dr. Snyder concluded. "As people generally become aware of these advances the laws ultimately have to conform to encompass and use new and more reliable information. Laws never create public opinion, but laws sooner or later always have to conform to public opinion. . . . Science has provided the tools, it is up to society to see that the law uses them."

Trends Of Our Times

The rate of admission to general hospitals in this country has increased by almost 80 per cent in the last 20 years, from 56 to 99 admissions per 1,000 population. As a result, says Health Information Foundation, these hospitals "have become increasingly important in the total health picture."

The average patient in a general hospital today spends 8.6 days there — a decline of about one-third from the 12.5 average of 20 years ago.

Children nowadays need hospital care less often than they did 20 years ago, largely because the rates for two common operations, tonsillectomies and appendectomies, have declined by about half. At the same time, Health Information Foundation reports, improved surgical techniques have increased admission rates for most other operations, especially complicated heart surgery.

B.U. To Speed Preparation Of Physicians

A plan to produce physicians in less time through a unified six-year program of college and medical education has been approved by Boston University. It will be put into effect when sufficient funds have been collected to finance its operation.

The new plan calls for two years of liberal arts, followed by a four-year medical curriculum in which two thirds of the class will take medical subjects and one third electives during each third of the year. Summer sessions will be used primarily to teach humanities and the nonmedical sciences until the sixth year, when students may also elect courses in medicine or research.

1,100 Persons Help Set American Medical Association's Policy

The American Medical Association's broad activities for helping to improve the nation's well-being "sprout from a tree measuring a figurative 1,100 people high," according to the association's (October 10) *Journal*.

These persons, many of whom serve in weekend and late night sessions, donate as many as 100 hours yearly to the association. None is on the A.M.A. payroll.

"The volunteering M.D.'s (and Ph.D.'s and L.L.D.'s and B.A.'s too) range in name from A to Z and come from all 50 states," the *Journal* article said. "Their talents enrich 13 A.M.A. councils, more than 100 committees, 20 sections of the Scientific Assembly, 10 specialty journals and approximately a dozen liaison groups with other organizations."

In addition, there are members of the Board of Trustees and the House of Delegates, the group who makes the final policy decisions for the A.M.A.

Medical Issues Resolved In Tax Court Decisions

The Tax Court of the United States has handed down two decisions with interesting sidelights. In one, it holds that there is no reason why a woman who makes herself extremely useful in her husband's medical practice should not be permitted to be his professional partner, for tax purposes, even though she is a non-MD. The other decision is beamed at the loophole — seeking patient, rejecting argument that he did right in setting down dancing instruction under head of "medical expenses" because his doctor said the ballroom might furnish some mild exercise.

Tinted Devices Declared Detrimental To Night Driving

The use of any night driving lens or windshield, whether tinted, reflecting, or polarizing, has been condemned by the Committee on Industrial Ophthalmology of the American Medical Association's Council on Industrial Health.

The committee — whose concern is the functions

and diseases of the eye as related to industry — delivered its opinion in the (Oct. 17) issue of the *A.M.A. Journal*, after receiving many inquiries.

Its opinion is:

— That a night driving lens or windshield reduces the light transmitted to the eye, and actually makes seeing at night more difficult.

— That the source of night driving glare is the contrast between the headlights of oncoming cars and the darker surroundings. This contrast is not reduced by the use of tinted lenses or windshields. Instead, they really reduce the intensity of illumination from both the headlights and the surroundings. This impairs vision.

— That there is no scientific evidence to support any claim that the use of tinted lenses or windshields improves night vision.

FDA Warns Against Use Of "Tes-Tape" By Women

The Food & Drug Administration has issued a warning against misuse of diabetes test papers to determine the fertility cycle. It was explained that at least one of these chemically treated papers, sold under trade name of "Tes-Tape" (Eli Lilly), contains tolidine, whose effects on female reproductive tissues may be injurious. When used as intended by the manufacturer, for detection of sugar's presence in the urine, "Tes-Tape" is safe, FDA emphasized. The agency noted that two companies have marketed plastic devices for applying the papers to the cervix.

Back In Our Own Back Yard

The Department of HEW's crackdown on degree mills includes shady ventures (some of them were named last week by Secretary Flemming) which grant "doctorates" in chiropractic, homeopathy and something known as "naturatrics" . . . in Chicago recently.

Indefinite Preservation Of Whole Blood

The indefinite preservation of whole blood is a practical possibility at an early date, according to the Office of Naval Research. The government agency has contracted with the Linde Company, Tonawanda, New York, to perfect processes for freezing, storing and thawing of whole blood in liquid nitrogen. Forming the groundwork are pioneering results of research conducted jointly by ONR and Navy's Bureau of Medicine and Surgery several years ago. These demonstrated practicability of using liquid nitrogen to freeze blood rapidly to minus 195 degrees Centigrade. No deterioration or alteration of properties was evidenced clinically after the blood was administered to patients.

Continued studies by the Linde Company, said ONR, have produced successful results in freezing volumes of one pint in fewer than 30 seconds, compared with 55

minutes under conventional methods. Tests show that 85 per cent of the cells are viable after protracted storage, which is a better mark than 21-day blood bank blood can show.

America Faces A Critical Shortage Of Physicians

America faces a critical shortage of physicians, in the opinion of an expert advisory committee whose findings and recommendations are scheduled to be made public this weekend. The report is based on a year's study by a group of consultants chaired by a layman, Frank Bane, former executive director of the Council of State Governments. It will be released by Dr. Leroy E. Burney, Surgeon General of the U. S. Public Health Service.

Presumably the Bane report will urge expansion of medical school enrollments and establishment of additional schools as the logical means of increasing the supply of physicians. It will be interesting to see how the committee, composed of 22 prominent educators, administrators and businessmen, deals with the sensitive subject of Federal aid to help reach the desired objective.

Supreme Court Is Being Asked To Decide

The Supreme Court is being asked to decide, in effect, where "cosmetology leaves off and surgery begins." A California woman has petitioned the highest tribunal to review her conviction of practicing medicine without a license. The Superior Court of California upheld a

lower court's finding that she practiced medicine without a license; that her methods of beauty treatment actually employed minor surgery.

The petitioner contends that she was doing no more than practicing cosmetology as that activity has been defined in a similar case in California (*People vs. Penny*): "The art of cosmetology includes the beautifying of the face, neck, arms, bust or upper part of the human body, by the use of cosmetic preparations, antiseptics, tonics, lotions or creams."

Private Physicians Throughout The Nation

Private physicians throughout the nation will care for increased numbers of servicemen's dependents in 1960. Before the middle of November, the Defense Department will promulgate new regulations which bring the Medicare program back to where it was prior to October, 1958, when benefits were severely restricted to save money. The cutback affected more dependents than had been estimated. For the year ended June 30, 1959, the government's Medicare bill was about \$70.5 million. This was \$20 million under the previous year, though the total dependents' load in 1959 was appreciably larger.

Military officials believe that 60 per cent of the families who were hit by the restrictions imposed a year ago — notably the ban on elective surgical procedures — either went without care or paid for it out of their own pockets. The other 40 per cent were able to obtain needed treatment in service hospitals.

Letters To The Editor

October 21, 1959

Daniel F. Hanley, M.D., Editor
The Journal of the Maine Medical Association
P. O. Box 240, Brunswick, Maine

Dear Doctor Hanley:

I have just received my copy of the *Journal of the Maine Medical Association* for October, 1959.

In that Journal there is an article entitled "Spontaneous Regression of Carcinoma of the Cervix, Report of a Case" written by Captain Paul E. Black and Dr. Ethan Allan Brown.

As a radiologist who deals with carcinoma of the cervix as a daily problem, I was naturally interested in the article and particularly so inasmuch as the patient was said to have been diagnosed and treated at the Eastern Maine General Hospital where I am a member of the attending staff in radiology. I should like to make it clear that I am writing this letter merely as a disinterested observer since I had nothing to do with the treatment of this patient. I was not in practice in this city at that time, and my first contact with this patient occurred when I read the article today.

I object to two statements made by the authors. In the opening paragraph of their discussion they state that "growths of this nature do not usually or routinely vanish" following this type and amount of radiation treatment. Although my personal method of treatment differs from that employed in

this patient I should like to point out that I have seen many patients who have had a complete cure of their tumor with this amount of radiation. I use the word "cure" because some of these patients are being seen from time to time in this hospital some 10 to 15 years after this type of treatment and demonstrate no evidence of residual or recurrent neoplasm.

Secondly, I would take vigorous issue with the paragraph upon which they apparently base the diagnosis of spontaneous regression. The quotation is as follows: "Following re-admission to the hospital on March 29, 1949, (that is one year later) the initial diagnosis of a squamous cell carcinoma of the cervix once more was re-confirmed." I searched the records of this hospital very carefully and the records of the pathology department of this hospital and could find no confirming histological report for that date. The only two histological diagnoses submitted on this patient were in 1948, prior to treatment. Apparently, and I beg to be corrected if the authors have additional information, the diagnosis of persistent squamous cell carcinoma is being based upon a clinical examination rather than on histology. Having had experience in the treatment of malignant disease with radiation I personally do not believe that one can be at all accurate in differentiating heavily irradiated tissue from tumor particularly in the presence of some inflammatory change.

Knowing some of the factors in the radiation treatment of

Continued on page 417

CLINICAL SESSION OF THE MAINE MEDICAL ASSOCIATION

Bangor, Maine—December 11-12, 1959

Friday, December 11, 1959

Morning Session

Eastern Maine General Hospital

10:30 A.M. Registration

11:00 A.M. to 1:00 P.M. "Treatment of Malignant and Benign Tumors of the Female Genital Tract" — Panel

THOMAS H. GREEN, JR., M.D., Boston, Massachusetts. Assistant Surgeon, Massachusetts General Hospital; Chief of the Department of Gynecology, Pondville State Cancer Hospital; Gynecologist, New England Deaconess Hospital; Instructor in Gynecology, Harvard Medical School — Moderator

WILLIAM M. SHUBERT, M.D., Bangor

DONALD F. MACDONALD, M.D., Bangor

SIDNEY CHASON, M.D., Bangor

EDWARD C. PORTER, M.D., Bangor

1:00 P.M. Luncheon at the hospital

Speaker: CHARLES JOHNSON, Field Representative, Division of Field Service, American Medical Association

Subject: "Aging — A Community Responsibility"

Afternoon Session

Eastern Maine General Hospital

2:30 P.M. "Pitfalls in Surgical Treatment of G.I. Tract Diseases" — Panel

BENTLEY P. COLCOCK, M.D., Newtonville, Massachusetts. Staff member Lahey Clinic; New England Baptist Hospital and New England Deaconess Hospital — Moderator

LLOYD BROWN, M.D., Bangor

ALLISON K. HILL, M.D., Bangor

Evening Session

Bangor House — Main Dining Room

6:00 to 7:00 P.M. Cocktail Party (Dutch treat)

6:00 to 10:00 P.M. Dancing

7:00 to 9:00 P.M. Buffet Dinner (\$4.00 per person)

Saturday, December 12, 1959

Morning Session

Eastern Maine General Hospital

8:30 A.M. Registration

9:00 to 9:45 A.M. "Adrenal Steroids in Ophthalmology"

GARDNER N. MOULTON, M.D., Bangor

10:00 to 10:45 A.M. "Adrenal Steroids in Dermatology"

MARGARET H. HANNIGAN, M.D., Auburn

11:00 A.M. to 12:30 P.M. "Adrenal Insufficiency"

ALBERT E. RENOLD, M.D., Boston, Massachusetts. Assistant Professor of Medicine, Harvard Medical School; Assistant in Medicine (Biochemistry), Peter Bent Brigham Hospital in Dr. George W. Thorn's Metabolic Unit; Director, Baker Clinic Research Laboratory, New England Deaconess Hospital — Moderator

12:30 P.M. Luncheon at the hospital

Speaker: DANIEL F. HANLEY, M.D., Executive Director, Maine Medical Association

Subject: "A Medical School for Maine"

Afternoon Session

Eastern Maine General Hospital

2:00 to 4:00 P.M. "Adrenal Steroids in Internal Medicine" — Panel

ALBERT E. RENOLD, M.D., Moderator

HARRY M. HELFRICH, JR., M.D., Presque Isle

ROBERT O. KELLOGG, M.D., Bangor

GEORGE J. ROBERTSON, M.D., Waterville

Notes

Acceptable for 8 hours Category II credit by the American Academy of General Practice.

The Woman's Auxiliary to the Penobscot County Medical Society, Mrs. Thomas H. Palmer, Jr., President, has made arrangements for the evening program on Friday.

Program Committee

EDWARD B. BABCOCK, M.D., *Chairman*

THOMAS H. PALMER, JR., M.D.

JAMES D. CLEMENT, JR., M.D.

Special Meetings

Friday, December 11

Eastern Maine General Hospital

4:30 P.M. or immediately following the Scientific Program

Maine Society of Obstetrics and Gynecology, Edward M. Southern, M.D., Secretary

Council of the Maine Medical Association, Carl E. Richards, M. D., Chairman

Maine Medical Association Committee on Disaster Medical Care, Charles W. Steele, M.D., Chairman

The Bangor House

7:00 P.M. Editorial Board of the Journal of the Maine Medical Association

Presentation of awards for contributions to the Journal during 1958-1959

Saturday, December 12

Eastern Maine General Hospital

4:30 P.M. or immediately following the Scientific Program

Maine Medical Association Committee on Aging, George J. Robertson, M.D., Chairman

Woman's Auxiliary To The Maine Medical Association

Friday, December 11

Evening Program

See Maine Medical Association Program

Saturday, December 12, 1959

Morning Session

10:00 A.M. Executive Board Meeting — at the home of Mrs. Benjamin Shapero, 99 Norway Road, Bangor

Afternoon Session

Main Dining Room, Bangor House

1:00 P.M. Sherry

1:30 P.M. Luncheon (\$2.50 per person)
Program

Mr. Bernard, Hair Stylist

Workshop — Subject: Chicago Conference

Special Guest: Mrs. Frank Gastineau, President, Woman's Auxiliary to the American Medical Association

Notes

Tickets for the buffet and luncheon must be obtained from the main desk in the Bangor House lobby.

Doctors' wives who are not members of the Auxiliary are cordially invited to attend all activities with the exception of the Board Meeting.

This meeting is being held in conjunction with the Fall Clinical Session of the Maine Medical Association — the evening program to be a purely social event for the members of the Maine Medical Association and their wives.



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Diabetes — A Continuing Health Problem

Diabetes Mellitus ranks 8th among the 10 leading causes of death in Maine. In 1958, there were 145 deaths from this disease which shows a crude death rate of 15.2 for the State as against an estimated rate of 15.4 for the United States as a whole.

It is generally accepted — primarily on the basis of studies made in Oxford, Massachusetts — that approximately two per cent of the adult population has diabetes: that half of the cases are unknown but can be detected with appropriate tests. Premature deaths from diabetes are estimated to cause a loss of more than 370,000 life-years every 12 months in this country. On the basis of the rough morbidity formula used by the American Diabetes Association, Maine would have a calculated incidence of some 23,000 diabetics: a potential of some 46,000. However, the disproportionate number of aging persons in this State would be expected to increase these figures somewhat.

The fact is well established that unknown diabetes can best be detected if it is sought among: 1) those who are overweight; 2) those who are relatives of known diabetics; 3) those in the older age groups; 4) those with unusually large babies. The disease is more prevalent among women than among men, the average diabetes death rate for women in Maine (April, 1959 Report of the National Office of Vital Statistics) is 20.9 as against an average diabetes death rate for men of 15.2.

Common methods of seeking unknown diabetics on a mass basis are by testing the urine through a number of rapid urine sugar tests, simple to perform and relatively inexpensive, — such as the Clinitest®, Dreyapak, or the more recently developed Clinistix® and Tes-Tape®; or through blood sugar tests.

Recently, the marked decline in numbers of persons with positive x-ray findings for tuberculosis, discovered through mass population x-ray screening programs, has changed the focus of the Department's efforts in this respect from mass x-raying of communities as a whole to groups within the community in which a higher incidence of the disease can be expected. In addition, the service has been expanded to include a diabetes screening program. The new service has been in operation since January of this year.

The prime objective of the program is to discover the hyperglycemic population among the groups screened.

Positive screening findings are referred to physicians for study and detection of previously unknown diabetes. For this purpose, the Department obtained on long-term loan from the Public Health Service a Hewson Clinitron — a semi-automatic mechanical device with which as many as 120 blood sugar determinations can be made in an hour. The machine weighs about 50 pounds and is easily transported in the x-ray mobile unit. Technicians comprising the x-ray screening team have been trained in the testing procedure and are conducting this program in conjunction with the x-ray screening program on a year-round basis.

As to the testing itself, it begins with the pipetting of 0.1 ml. of blood from the finger, to which is added 5 cc. of distilled water as a diluent. The sample is then tested with standardized reagent tablets at a screening level of 180 mg. per cent of blood glucose in accordance with the Wilkerson-Heftmann method.

Although not easily controlled, individuals scheduled for the test are encouraged to eat a meal rich in carbohydrates within 1½ to 2 hours prior to the test.

A clerk receptionist accompanying the team fills out a registration card for each person with the usual identifying information, plus a simple history, time since eating last meal, the name and address of the physician of the individual's choice. The code number is taken from the card and recorded by the technician performing the test onto the tube in which the individual's blood has been placed for processing by the Clinitron. Test results are then recorded on the registration card: positive tests referred to the individual's physician for diagnostic study and the physician requested to report his final diagnosis to the Department for essential record-keeping and program evaluation. Negative screening reports are sent directly to the individuals concerned. The Department does not do any re-testing under the present program.

In the nine months of intermittent operation of the program, 5,797 persons have been tested and 71 persons with positive screening tests referred to physicians. From these, 11 newly discovered cases of diabetes have been verified to the Department by physicians. No report has been received on 24 referrals.

The following tables illustrate the breakdown on these figures:

TABLE 1
ANALYSIS OF 71 PERSONS REFERRED TO PHYSICIANS FOR DIAGNOSTIC STUDY

Groups Tested (numbers)	Total Positive Screenees Referred	Physician Reported				
		Not Diabetic	Newly Discovered Diabetes	Diabetic Diagnosis Prior to Screening	Diagnosis Not Determined	No Report Received
1,455	17	10	3	2	1	1
604	8	1	1	2	0	4
2,286	24	7	3	2	3	9
154	0	0	0	0	0	0
466	1	0	1	0	0	0
47	0	0	0	0	0	0
285	3	0	1	0	1	1
47	2	1	0	0	0	1
144	2	1	0	0	0	1
309	14	4	2	1	0	7
Total 5,797	71	24	11	7	5	24

An interesting aspect of the above is that several of the known diabetics have, as a result of the test, re-

turned to medical supervision after arbitrarily discontinuing insulin over a period of years.

TABLE 2
REFERRALS BY AGE GROUPS

MALES						FEMALES					
Total	Under 20 yrs.	20-44 yrs.	45-64 yrs.	65-74 yrs.	75-84 yrs.	Total	Under 20 yrs.	20-44 yrs.	45-64 yrs.	65-74 yrs.	75-84 yrs.
38	—	8	25	3	2	33	1	9	21	2	—

The program is receiving gratifying response in that nearly 100 per cent of those who are offered the tests — x-ray and capillary blood — request both. As the program develops and needs are defined, it is hoped to provide more services by way of general and special education as well as physician consultation.

"The need for continuing medical supervision of the diabetic beyond the point where the medical problem ceases to be acute is, unfortunately, not universally recognized as essential," according to a recent public health report.* "Consideration of the following factors should, however, emphasize the very real necessity for this continuing supervision:

- 1) The diabetic faces a problem for which no cure yet exists, and, while he may be kept alive and comfortable, he may never be freed from the pathology causing the disease.
- 2) Diabetes causes metabolic and pathologic changes which pre-dispose the patient to greater susceptibility to intercurrent infection, trauma, or insult.

Because of these basic changes in the body, the mechanism, and the longevity of the patient, a single set of rules will not meet the patient's needs over an indefinite period of time.

- 3) Patient cooperation in any disease increases with his understanding of the disease, and this is especially true in diabetes where the patient must himself be responsible for his own day-to-day care. He gives his own insulin, eats according to his diet prescription, and so forth. The diabetic's education in self-care must be continuous if it is to be effective.
- 4) The pathological processes in diabetes are continuous and progressive over a period of years, and the physician must follow them continuously if he is to give proper treatment.
- 5) Finally, in diabetes, the physician is prescribing daily doses of potent medicine, and relating that dosage to a specific diet and a specific amount of physical activity by the patient. Such a regimen cannot possibly be evaluated without continuing supervision."

**Diabetes Program Guide* — U. S. Department of Health, Education, and Welfare, pp 38-39.

County Society Notes

HANCOCK

October 14, 1959

The October meeting of the Hancock County Medical Society was held at the Hancock House October 14, 1959. Eleven members and three guests were present.

Bradley E. Brownlow, M.D. and Russell M. Lane, M.D., both of Blue Hill, were elected to membership in the society.

Edward P. Richardson, M.D., of Boston, Massachusetts, was the guest speaker. He presented an interesting paper on "Varieties of Dementia" together with the characteristic neuropathology of these diseased states.

RUSSELL G. WILLIAMSON, M.D.
Secretary

KENNEBEC

October 15, 1959

The October meeting of the Kennebec County Medical Society was held on October 15, 1959 at the Elmwood Hotel in Waterville.

Anthony E. Lepore, M.D., president, opened the business meeting following a dinner at 7:00.

Richard E. Barron, M.D., Monmouth and Craig W. Morris, M.D., Veterans Administration Center, Togus, were elected to membership in the society.

The speaker of the evening was Louis K. Diamond, M.D. of Children's Hospital, Boston. His subject was "Saving the New Born Child."

ARCH H. MORRELL, M.D.
Secretary

SOMERSET

August 18, 1959

The Somerset County Medical Society held its annual meeting August 18, 1959 at the Colony House, Lakewood, Maine. There were seventeen members present and the members and their wives had supper at the Lakewood Inn.

The program consisted of a case of gallbladder surgery that was presented by Dr. W. Edward Jordan, Skowhegan, Maine.

The annual election of officers was held with the following results:

President: Albert J. Bernard, M.D., Skowhegan
Vice-President: Paul R. Briggs, M.D., Hartland

Secretary-Treasurer: Harland G. Turner, M.D., Norridge-
wock

Delegate to Maine Medical Association: George E. Sullivan,
M.D., Fairfield

Alternate: Howard L. Reed, M.D., Skowhegan

Councilors: Harland G. Turner, M.D.; W. Edward Jordan,
M.D., Skowhegan; and George E. Young, M.D., Skow-
hegan

Committee on Ethics and Discipline: Ernest D. Humphreys,
M.D., Pittsfield; Franklin P. Ball, M.D., Bingham; and
Marian S. Strickland

HARLAND G. TURNER, M.D.
Secretary

YORK

October 14, 1959

The bimonthly meeting of the York County Medical Society was held at the York Hospital in York Village on October 14, 1959. Dinner was served by the ladies auxiliary to the 21 members and 3 guests present. A bottle of perfume donated by Jack Dalton of Eli Lilly and Company was drawn for.

A business meeting was held with William E. Dionne, M.D. presiding. A nominating committee consisting of James S. Johnston, M.D., Paul E. Taylor, M.D. and Charles W. Kinghorn, M.D. was appointed by the president. He also appointed Stephen A. Cobb, M.D. a committee of one to arrange the meeting places for 1960. The annual meeting of the York County Medical Society will be held at Kennebunk. It was voted to have the Insurance Committee discuss insurance at the January meeting.

Carl E. Richards, M.D. discussed the Forand bill.

CHARLES W. KINGHORN, M.D.
Secretary

New Members

HANCOCK

Bradley E. Brownlow, M.D., Blue Hill Memorial Hospital,
Blue Hill

Russell M. Lane, M.D., Water Street, Blue Hill

KENNEBEC

Richard E. Barron, M.D., Main Street, Monmouth
Craig W. Morris, M.D., Veterans Administration Center, Togus

News and Notes

Maine Physicians Attend Cancer Symposium

Twenty Maine physicians attended the Symposium On Evaluation Of The Early Diagnosis Of Cancer in New York City on October 26 and 27. The trip was sponsored by the Maine Cancer Society with the cooperation of the Council of the Maine Medical Association.

The meeting, conducted by the American Cancer Society,

featured addresses by national leaders in the field of early diagnosis and treatment of cancer followed by panel discussions. Subjects covered were the economics of cancer detection, the value of periodic examinations in cancer detection, precancerous lesions and their treatment and the treatment of early cancer.

Continued on page 413

When the vagus burns at both ends



Pro-Banthine® with Dartal® moderates both mood and gastrointestinal spasm

The slow simmer of anxiety frequently causes kindred gastrointestinal overactivity. The spasticity and the accompanying distress of excess acid lead to loss of efficiency. Patients subject to such psychoenteric upsets require therapy to calm both ends of the vagus.

Pro-Banthine with Dartal contains two agents required for such dual therapy: Pro-Banthine to control and curtail the flare-ups of spasm, excess acidity and excess motility,

and Dartal to smother simmering anxiety and tension.

Pro-Banthine with Dartal contains 15 mg. of Pro-Banthine (brand of propantheline bromide) and 5 mg. of Dartal (brand of thio-propazate dihydrochloride) in each tablet.

Dosage: One tablet three times a day.

G. D. Searle & Co., Chicago 80, Illinois.
Research in the Service of Medicine.

Necrologies

LLOYD H. BERRIE, M.D.

1903 - 1959

Lloyd H. Berrie, M.D., 56, who practiced in Maine for 21 years, died in Caribou on June 5, 1959.

Dr. Berrie was born on May 21, 1903 in Houlton, Maine, the son of Perl S. and Dora Lavina Berrie. He attended Houlton High School and was graduated from the University of Maine in 1924. He received his medical degree from Tufts University School of Medicine in 1934 following which he was assistant for two years to Dr. Hallowell Davis, a Fellow in Psychology and Research at Harvard Medical School. Dr. Berrie was a resident physician at the Worcester City Hospital, Worcester, Massachusetts, for one year and also had

special training at the New York Eye and Ear Infirmary. He began the general practice of medicine in Houlton in June, 1938. In December, 1940 he moved to Caribou where he specialized in ophthalmology and otology.

A member of the Maine Medical Association since 1936, Dr. Berrie was also a member of the Aroostook County Medical Society and the American Medical Association.

Surviving Dr. Berrie are his wife, the former Phoebe Young of Houlton whom he married in December, 1940; his mother, Mrs. P. S. Berrie, Houlton; and two sisters, Mrs. B. W. Smith, Houlton, and Mrs. J. P. Coulton, Wichita, Kansas.

ALBERT H. DAMON, M.D.

1872 - 1959

Albert H. Damon, M.D., of Limestone, died July 27, 1959 following a brief illness.

Dr. Damon was born in Charlotte, Maine on October 23, 1872, the son of Jason F. and Elizabeth Hobart Damon. He was graduated from Hebron Academy in 1892, attended Dartmouth College and received his medical degree from the University of Vermont College of Medicine in 1900. He had since attended postgraduate courses at the New York Lying-In Hospital and the New York Polyclinic Hospital.

During World War I, Dr. Damon served as a battalion surgeon with the Sixth Battalion, 131st Brigade, and as adjutant of the 322nd Medical Regiment, 97th Division, with the rank of major.

After practicing a year in Franklin, Dr. Damon moved his practice to Limestone where he remained until his death. He became a member of the Board of Health in Limestone in 1903, and when that organization was replaced by a health officer, he assumed that position and held it until his death. Dr. Damon specialized in obstetrics. He became an honorary member of the Maine Medical Association and the Aroostook

County Medical Society in 1950 and received his 55-year pin in 1955. He was also a member of the American Medical Association.

Dr. Damon had an outstanding record of community service and in 1951, a testimonial dinner was held in his honor for 50 years of services in fields other than medicine. For his service to the Limestone school system, the citizens of the town named the new elementary school at Loring Air Force Base after him in dedication ceremonies held in 1954. The doctor was chief of the Limestone Fire Department for 36 years and in recent years was honorary chief. He was a past president of the Board of Trade, past president of the Limestone Chamber of Commerce, past president and a charter member of the Limestone Rotary Club, past master of the Masonic Lodge and a District Deputy of the Grand Lodge, past patron of Stella Chapter, Order of the Eastern Star and a member of Obar-Phair Post, American Legion.

Surviving Dr. Damon are his widow, the former Susie E. Fisher; two sons, Hobart of Boston and Jon of Limestone; a brother, Paul, of Charlotte, a niece and a nephew.

WALTER S. STINCHFIELD, M.D.

1873 - 1959

Walter S. Stinchfield, M.D., of Skowhegan, died August 8, 1959.

Dr. Stinchfield was born in Skowhegan on April 3, 1873, the son of Calvin and Abbie Morrill Stinchfield. He attended Skowhegan schools, Bowdoin College and received his medical degree from the Bellevue Hospital Medical College, New York, in 1896.

After two years in Toledo, Ohio, he returned to Skowhegan in 1898 to practice general medicine until his retirement in 1953. He was Somerset County's first medical examiner and held that post for 45 years. He was on the staffs of Redington, and Fairview Hospitals.

He was an honorary member of the Maine Medical Association and the Somerset County Medical Society, receiving his 50-year pin in 1946, his 55-year pin in 1951 and a 60-year pin in 1956. He was a member of the Skowhegan school board for 18 years and a member of the Skowhegan Rotary Club. He was also a 32nd degree Mason and received his 50-year jewell in 1957 from Somerset Lodge.

Dr. Stinchfield and his wife, the former Mary Clough, celebrated their 60th wedding anniversary last June 14th. Besides his widow, he is survived by a daughter, Mrs. Fred Chase, Skowhegan; a son, Allen Stinchfield, M.D., of Hallo- well; four grandchildren and five great-grandchildren.

NEWS AND NOTES — *Continued from page 410*

Physicians attending were. Andre Sterlin, M.D., Fort Kent; George Geyerhahn, M.D., Portland; Byron V. Whitney, M.D., Bangor, Clifford W. Gates, M.D., Gorham; Edgar J. Smith, M.D., Fairfield; George E. Sullivan, M.D., Fairfield; Ernest W. Stein, M.D., Pittsfield; Captain Paul E. Black, M.C., U.S.N., Brunswick; Wedgewood P. Webber, M.D., Lewiston; Stanley B. Covert, M.D., Kingfield; Albert Grish, M.D., Rumford; Alexander W. Magosci, M.D., York; Edward P. Williams, M.D., Houlton; Lee W. Richards, Jr., M.D., Augusta; William C. Luther, M.D., West Sullivan; Charles H. Lightbody, M.D., Guilford; Oakley A. Melendy, M.D., Augusta; Charles G. Burr, M.D., Houlton; David Davidson, M.D., Portland, and Hugo Hochschild, M.D., Thomaston.

Maine Cancer Society Elects

William F. Mahaney, M.D., Saco, has been elected president of the Maine Cancer Society. The surgeon, a past president of the Maine Medical Association, succeeds Irving I. Goodof, M.D., Waterville pathologist, who served for four years.

New members elected to the board of directors at the society's annual meeting in Brunswick are: Mrs. Esther M. Kennard, Brunswick, and Mrs. Nelle Penley, Bangor. Reappointed were: Fred A. Clough, Rumford; Mrs. Pearl R. Fisher, Waterville; Daniel F. Hanley, M.D., Brunswick; Frederic S. Newman, Bangor; Eugene E. O'Donnell, M.D., Portland; Mrs. Lester M. Weeks, Waterville and Mrs. George W. Pullen, South Harpswell.

Executive committee members will be Robert E. Owen, Vassalboro, chairman; president-elect, Dr. Mahaney; Forest B. Ames, M.D., Bangor; Isaac M. Webber, M.D., Portland; Frederic S. Newman, Bangor. Secretary is Mrs. George W. Pullen, South Harpswell. Treasurer is Samuel L. Forsaith, Brunswick. Mrs. Mary Leo Eaton, Bath, was reappointed for a three-year term as the Society's executive director.

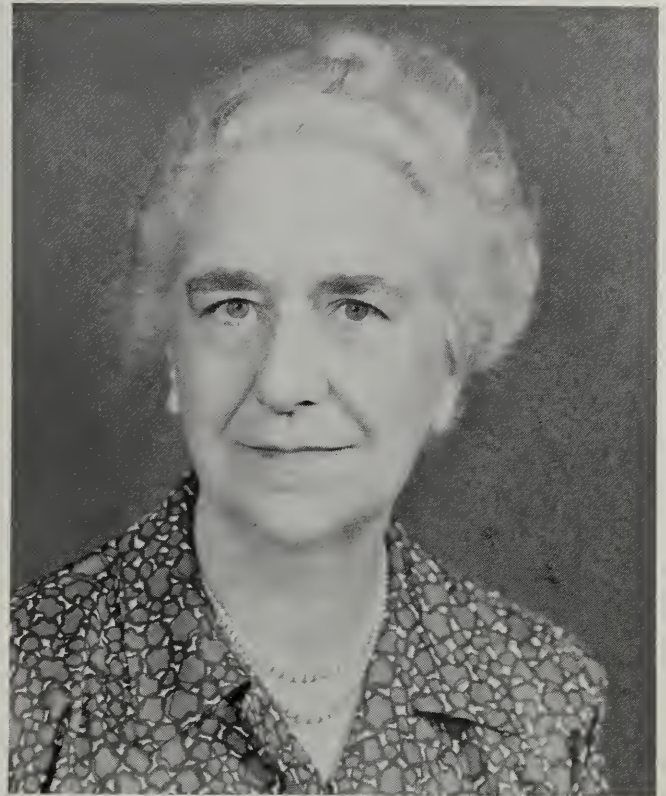
Seven Maine Physicians Granted ACS Fellowships

Drs. Paul M. Beegel, Auburn; William M. Shubert and John A. Woodcock, Bangor; Llewellyn W. Cooper, Bar Harbor; Peter H. Mason, Millinocket; Wilfred A. Cloutier, Lewiston, and Morrill Shapiro, Portland, are physicians in Maine who have fulfilled the requirements of medical education and present evidence of advanced training in surgery, good moral character and ethical practice necessary for fellowship in the American College of Surgeons. Their fellowships were granted on October 2 at the annual convention of the American College of Surgeons in Atlantic City, New Jersey.

Maine Trudeau Society Officers

William L. MacVane, Jr., M.D., Portland, was elected president of the Maine Trudeau Society, an organization of physicians interested in diseases of the chest, which serves as the medical advisory section of the Maine TB Association. Dr. MacVane succeeds Dr. Darlington. Other officers elected were: Louis N. Fishman, M.D., Lewiston, vice-president, and William L. Ventimiglia, M.D., Portland, secretary.

C. Harold Jameson, M.D., Camden, was elected president of the Maine Tuberculosis Association at the annual meeting October 16 at the Bangor House. Dr. Jameson, a general surgeon and a past president of the Maine Medical Association, succeeds Howard L. Cousins, Jr. of Bangor. Brinton T. Darlington, M.D., Augusta, was elected president-elect; Albert Aranson, M.D., Portland; Edward L. McMonagle, Rumford, and Miss Marion E. Martin, Augusta, vice-presidents; Elmer L. Mitchell, Manchester, treasurer; Brooks Brown, Augusta, assistant treasurer, and Mrs. Deseiges E. Martin, Augusta, clerk.

**Huddilston Medal Awarded To
Miss Helen F. Dunn, R.N., Of Augusta**

Miss Helen F. Dunn, R.N., of Augusta, retired director of the Division of Public Health Nursing, State Department of Health and Welfare, was named 1959 recipient of the Roselle W. Huddilston Medal at the 58th Annual Meeting of the Maine Tuberculosis Association held in Bangor on October 16.

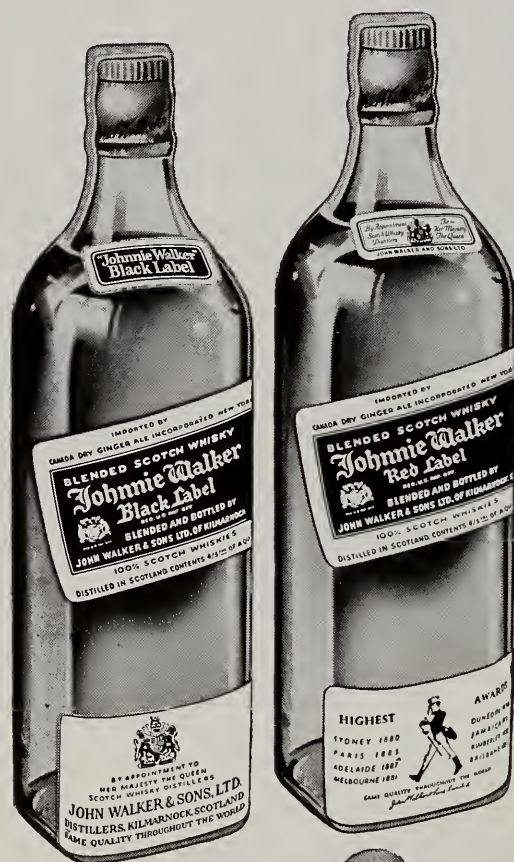
The Huddilston Medal, each year awarded to a Maine citizen for outstanding and meritorious service in the field of general health to the people of Maine, was named for the late Mrs. John Homer Huddilston of Orono, outstanding voluntary leader and worker in health.

In the citation read at the presentation of the medal to Miss Dunn, attended by 125 health workers from throughout the state, Dr. Thomas A. Foster, Portland, chairman of the Huddilston Medal Committee, stated, "As early as the year 1919 she took up the special field of public health nursing and in 1940 entered the employ of the State Department of Health as director of public health nursing. Since that time, and in the spirit of dynamic humanitarianism which has left its imprint on virtually every corner of the state, the name of the recipient and public health nursing have been practically synonymous.

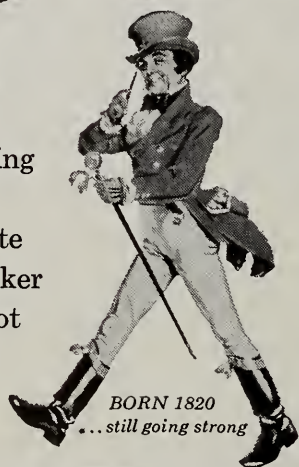
"Not the least of her accomplishments was her early recognition of the 'grass roots' potential for education in and assistance toward community planning and action for health. To this end, she has worked to encourage and develop citizen participation in local health projects on a state-wide basis and today many local health councils and committees attest to her vision and wisdom in this regard. The results of these councils and the leadership she gave to them has strengthened health programs throughout the entire state."

Dr. Foster also pointed out Miss Dunn's leadership in having enacted the Nurses Enabling Act, making it possible

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to establish public health nursing on local levels in the state, her work on the Joint Committee on School Health for the Department of Health and Education, on the Advisory Committee of the Practical Nurse Training Program, Civil Defense, and the survey on nursing needs and resources carried out in 1951.

Miss Dunn retired last year to take up a career in voluntary health service and now serves as Coordinator of Women's Activities of the Maine Chapter of the Multiple Sclerosis Society, on the Board of Directors of the Maine Tuberculosis Association, and on her home city's board of health.

The 1959 Medalist has been active in the Health Council of Maine and the State Multidisciplinary Health Study Committee since their inception. At the present time she is program chairman of the Health Council.

One of the greatest services of Miss Dunn to the people of Maine, in the words of Dr. Foster, was that "as consultant to all agencies and groups in her own and allied fields, she has been a willing worker and avid student, keeping abreast of current trends and developments and providing leadership in countless ways toward effecting change when this was indicated."

She is a past president of Maine State Nurses' Association, the Maine Welfare Conference, and other clubs and organizations.

Previous winners of the Huddilston Medal were Mr. Phillips Merrill Payson, Portland; and Dr. Frederick T. Hill, Waterville.

Maine Medical Center Staff Honored

Members of the Maine Medical Center X-ray staff were awarded the James Suzuki Memorial Trophy for the best technical exhibit at the New England Conference of X-ray Technicians in Hartford, Connecticut on September 26 and 27, 1959.

Maine Chapter, American Academy of General Practice Annual Meeting

The annual meeting of the Maine Chapter of the American Academy of General Practice was held in Lewiston on October 3, 1959. At this meeting the following officers were elected for the coming year: President, Norman E. Dyhrberg, M.D., Cumberland Mills; President-Elect, Sidney R. Branson, M.D., South Windham; Vice-President, Linus J. Stitham, M.D., Dover-Foxcroft, and Secretary-Treasurer, John D. Denison, M.D., Gardiner. Directors elected are Thomas G. Harvey, M.D., Caribou; Eustache N. Giguere, M.D., Lewiston; John B. Madigan, M.D., Houlton; Herman G. Derry, M.D., Portland; George W. Bostwick, M.D., Newcastle, and Seth H. Read, M.D., Belfast. Clyde I. Swett, M.D., Island Falls, and J. Paul Nadeau, M.D., Lewiston, were elected Delegates to the National Assembly. Norman E. Dyhrberg, M.D. and Paul C. Marston, M.D., Kezar Falls, were elected Alternates.

The meeting was followed by the annual banquet at which Fount Richardson, M.D., of Fayetteville, Arkansas, National President of the American Academy of General Practice, was principal speaker.

"It is doubtful whether any vasodilator drug dilates the cerebral vessels." Sir Russell Brain, *The Lancet*, November 2, 1957, page 862. Selected by Andrew M. Babey, M.D., Las Cruces, New Mexico.

Announcements

Proposed Tuberculosis Conference

The State Department of Health and Welfare, the Maine Tuberculosis Association and the Maine Medical Association have agreed to jointly sponsor and conduct a "summit conference" on the problems of tuberculosis control, according to an announcement by Dean Fisher, M.D., Department Commissioner, Edmund P. Wells, executive director of the voluntary health association and Daniel F. Hanley, M.D., executive director of the medical society.

The purpose of the conference, the officials said, would be to gather and analyze information on the problem of tuberculosis, re-study the status of TB in Maine, review the programs and policies of the two action agencies in view of new information and techniques, determine unmet program needs, devise new indicated activities, clarify responsibilities, work out cooperative and integrated approaches to problems and formulate a sound program to submit to the next legislature.

A committee of conferees has been appointed to initiate planning for the conference and to work out such details as formal information presentations, gather and prepare necessary background information for conference use, establish a format and procedure and select the principals who will take part in the conference.

Chairman of the planning group and representing the medical society will be Brinton T. Darlington, M.D., Augusta, former president of the Maine Trudeau Society. Representing the Department and TB association are Alta Ashley, M.D., Health Officer of District III; Miss Katherine D. Gay, R.N., Damariscotta, Administrative Assistant, Division of TB Con-

trol; Mrs. Ford Campbell, M.P.H., Orono, executive director, Bangor-Brewer TB and Health Association; and Mr. Wells.

The conference is scheduled for sometime in early January; the final date and location to be announced.

The New York and Brooklyn Regional Committee on Trauma of the American College of Surgeons

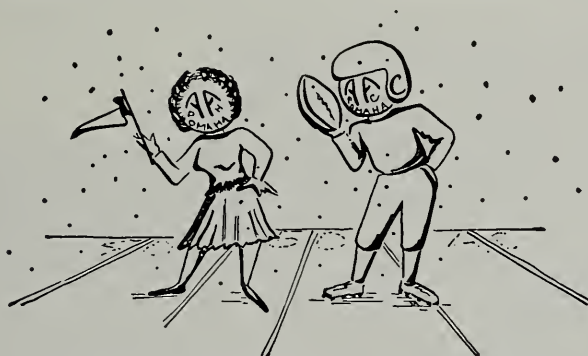
A two day course on The Hip will be held on December 4th and 5th, 1959 at the Einhorn Auditorium-Lenox Hill Hospital, 76th Street and Lexington Avenue, New York, New York.

On Friday morning, December 4th, the topics will be Anatomy and Surgical Approaches, Radiographic Evaluation, Clinical Evaluation and Care of the Elderly Patient with an Injured Hip. In the afternoon the topics will be Intracapsular Fractures, Intertrochanteric Fractures, Traumatic Dislocations and Slipped Upper Femoral Epiphysis.

On Saturday morning, December 5th, the topics will be Surgical Reconstruction, Femoral Articular Replacement, Vitalium Mold Arthroplasty Osteotomy and Similar Methods and Arthrodesis. In the afternoon the topics will be Pathological Fractures, Treatment of Infection — Surgery and Antibiotics, Coxa Plana and Congenital Dislocations and Synovial, Bursal and Muscular Lesions.

The fee for the course is \$40.00. For internes and residents the fee will be \$20.00.

For further information write to Sawnie R. Gaston, M.D., Chairman, 180 Fort Washington Avenue, New York, 32, N.Y.



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The New Orleans Graduate Medical Assembly

The twenty-third annual meeting of The New Orleans Graduate Medical Assembly will be held March 7 through 10, 1960 with headquarters at The Roosevelt Hotel.

There will be speakers on the following subjects: Anesthesiology, Dermatology, Gastroenterology, General Practice, Gynecology, Internal Medicine, Neurosurgery, Obstetrics, Ophthalmology, Orthopedic Surgery, Otolaryngology, Pathology, Pediatrics, Proctology, Radiology, Surgery and Urology.

Following the meeting there will be a Clinical Tour of the West Indies, a cruise including Puerto Rico, Virgin Islands, Martinique, Barbados, Trinidad, Curacao and Haiti.

For further information write Mannie D. Paine, Jr., M.D., Secretary, The New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, Room 103, New Orleans 12, Louisiana.

Courses on Management of Mass Casualties

Spaces for civilian physicians for Management of Mass Casualties courses during the fiscal year 1960 have been made available to the AMA Council on National Defense by the Office of the Surgeon General, Department of the Army. There are two openings for civilian physicians for a course at the Walter Reed Army Institute of Research, Walter Reed Army Medical Center in Washington, D. C. from February 15 through 20, 1960. Other courses from November 30 through December 4, 1959, February 15 through 19, 1960, April 25 through 29, 1960 and June 13 through 17, 1960 also have two openings each. These will be held at the Army Medical Service School, Brooke Army Medical Center, Fort Sam Houston, San Antonio, Texas. Physicians interested in attending one of these courses are requested to write directly to the Council on National Defense, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Pan American Medical Association Congress

May 2 to 11, 1960 are the dates for next Pan American Medical Association Congress which will meet in Mexico City. The scientific program, through its 48 different medical sections, will include all branches of medicine and surgery, dentistry, hospital administration and medical education. New sections added since the last Pan American Medical Association Congress include Space Medicine, Hematology, Cancer Cytology and a large section on General Practice. There will be many special panels, including Pharmacology and New Drugs, Mental Diseases, Nutrition, Relationship of Dentistry to Medicine, Cancer Research, and Medical Press Relations.

For further information contact Joseph J. Eller, M.D., Director General of the Pan American Medical Association, 745 Fifth Avenue, New York, N. Y.

Bahamas Conferences

The second Bahamas Surgical Conference will be held at the British Colonial Hotel, Nassau, Bahamas from December 28, 1959 until January 16, 1960.

The second Bahamas Serendipity Conference will be held at the British Colonial Hotel, Nassau, Bahamas from January 17 until January 30, 1960.

The first Bahamas Allergy Conference will be held at the Nassau Beach Lodge, Nassau, Bahamas from March 5 until March 12, 1960.

Write Irvin N. Wechsler, General Manager, Bahamas Conference, P. O. Box 1454, Nassau in the Bahamas, for further information.



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LETTERS TO THE EDITOR — *Continued from page 405*
 this patient and having previously estimated dosages on some of these patients who were treated in this fashion in that decade, I would say that this patient probably received in the vicinity of 7 to 9,000 R in the cervix depending upon the size of the patient and other considerations such as the position of the radium which are not readily determined from the available records at this time. Certainly I have seen many patients who have had their tumors completely disappear with this dosage and are alive and well many years later.

In summary I believe that the conclusions of the authors in this article can be seriously challenged and I certainly do not believe that this case can be represented as one undergoing spontaneous regression of a carcinoma of the cervix.

I have taken the liberty of sending a copy of this letter to Captain Black and I would appreciate his comment as well as any that you might have.

Very truly yours,

EDWARD C. PORTER, M.D.

October 29, 1959

Daniel F. Hanley, M.D., Editor
 The Journal of the Maine Medical Association
 P. O. Box 240, Brunswick, Maine

Dear Doctor Hanley:

Dr. Edward C. Porter of the Eastern Maine General Hospital graciously sent us a copy of the letter he sent you concerning the recent paper written by Dr. Black and me. I must agree that his points are well taken and that, by and large, I personally agree with him.

The paper was not submitted for publication, although it was in our hands for fifteen years, until Everson and Cole had reviewed the data and felt that treatment was "considered adequate to exert a significant influence on the growth of neoplastic disease."

In my own experience with carcinoma of the cervix, which extends for a period of more than twenty-five years, during which time I have seen only several hundred patients (no great number) not one who received irradiation therapy of the types described in the paper demonstrated an unchanged tumor one year later. Dr. Porter has a good point when he says that no histological specimens were taken for examination by the pathologist. I would like to have him search further in the records of the hospital and see exactly how many times such biopsies are requested when the tumor has been unchanged, as a result of treatment, for more than one year. Dr. Porter says that though his personal method of treatment differs from that employed in this patient he has seen patients who after ten to fifteen years of the type of treatment he does not use, would demonstrate no evidence of residual or recurrent neoplasm.

Diligent inquiry among Radiologists, whose combined experience would total at least three centuries, showed that not one could recall a similar case, although one did recall a patient, whose name he did not remember, who as a result of this amount of treatment did not have a recurrence for perhaps a decade. In the absence of any recollection of the patient's name or any referring physician this case report could not be included with ours.

Dr. Porter says that the patient "probably received in the vicinity of 7 to 9000 R." The photocopy of the hospital records shows this not to have been true and if the facts are not stated in the hospital record they can just as easily represent less treatment than the more he assumes that the patient was given.

Diligent inquiry among a number of Gynecologists, whose combined experience also represents several centuries of observation, led me to believe that none had seen a patient who, given such radiation treatment, showed no changes a year later.

It is difficult for me to believe that a tumor would appear to be the same to all of the observers and the patient be sent home to die, on a regimen of 16 grs. of Morphine daily, had

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any of the physicians thought that it had changed to inflammatory tissue that exactly resembled the previous growth. On the basis of their personal experience certainly they should have given the patient the benefit of the doubt and the patient and the members of her family should have been told, that though the tumor was apparently larger but unchanged in appearance, it might not at that time have been malignant.

Dr. Black and I can only go by the record and not on the assumption that because no slides were taken for examination by a pathologist, that a full year after radiation, the effects of such radiation, although not apparent, were nevertheless affecting the cells of the neoplasm.

The paper was not submitted until a search of the literature had been made. If, because we are not familiar with the field of Radiology, we missed a report listing patients similar to ours in whom no changes were apparent a year later (although clinically) and no metastases had occurred by fifteen years after treatment, I wonder why Dr. Porter did not append it to his letter.

I can well understand that he may not have the time or the opportunity and perhaps the facilities for engaging in the search we conducted but instead of saying that he would "like to point out that I have seen many patients who have had a complete cure of their tumor with this amount of radiation," perhaps he can give us the number of patients admitted to Eastern Maine General Hospital during February, 1948 who, having been given whatever amount of radiation the record shows, are alive today and free of metastases, or for that matter the original neoplasm. The records of all the admissions for inoperable carcinoma of the cervix treated by radiation should be available within minutes. It should not take more than one day to telephone the patient, her husband, her friends, or her relatives, and discover whether indeed such a thirteen year "cure" had occurred.

This would be an easily written and most noteworthy contribution to the literature of Radiology, in that it would help us tell our patients with similar carcinomata of the cervix, that although no change had occurred within a year (clinically, of course), that such and such a percentage of patients of this type could look forward to fifteen years of superb health.

In summary, if this type of treatment is so successful, I would like to have Dr. Porter tell me why his "personal method of treatment differs from that employed in the patient"; how many patients he sees and treats in this manner, present tumors unchanged in appearance, but histologically inflammatory rather than malignant one year later; and, lastly, how many of the patients in this age group with this type of tumor unchanged one year later with the amount of radiation listed are alive today.

Until he can present us with this information, his letter represents an opinion and a conclusion, if not worse then certainly no better than ours.

If he thinks that everyone concerned with this patient was mistaken, as regards (1) the primary clinical diagnosis, (2) the results of the biopsy, (3) the microscopic examination of the tissues, (4) the amount of radiation listed as having been applied, (5) the clinical diagnosis reconfirmed one year later, and (6) the prognosis as hopeless, then he should take on all of these physicians, surgeons, pathologists and radiologists, and challenge them, and as well, Doctors Everson and Cole, our radiological and gynecological advisors, our experience, and the literature of Radiology.

When he has gone to as much trouble as we did, I will be very happy indeed to hear from him and send you a retraction of the opinions expressed in our Case Report.

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The Journal of the Maine Medical Association

Volume Fifty

Brunswick, Maine, December, 1959

Number 12

The Estlander Flap In Cancer Of The Lip

JOHN VAN DUYN, M.D.*

Of every fourteen lip cancers,
twelve will be of the lower lip,
one of the upper lip, one of the commissures.

Cancer of the lip comprises approximately 2% of all cancers in males and 0.1% in females.¹ The great majority of these cancers are squamous cell epitheliomas arising on the vermilion border. An occasional basal-cell tumor may begin on the skin side of the border and erode inwards.

Of every fourteen lip cancers, twelve will be of the lower lip, one of the upper lip, one of the commissures.² The reason for this preponderance of lower lip cancers is not entirely clear. Conway noting the frequency of premalignant lesions of the lower lip in service men stationed in the tropics calls attention to the fact that sunlight strikes down upon the border of the lower lip rather than the upper.³

The generally preferred treatment of cancer of the lip is surgical excision. Even though a preoperative biopsy has been made, histological examination of the total specimen should also be done both for confirmation of the diagnosis and for the establishment of its complete removal. Also in favor of excision we are reminded that the sensitivity of neoplastic tissue to irradiation is unpredictable.⁴

The usual method of excision is by a full thickness wedge resection of the lip including 1/2 to 1 centimeter of healthy tissue on each side of the lesion, the incisions coming together at an apex in the direction of the chin. Other procedures may be indicated along with the local resection of the lesion itself such as some form of radical neck dissection, lymph node biopsy and/or

superficial excision of the rest of the vermilion border for persistent leukoplakia (the "lip-shave" operation⁵).

Nearly a third of the width of the lower lip (somewhat less for the upper) can be removed and the defect sutured without significant distortion of the mouth. If more than this must be taken some form of flap construction will be necessary; and, although other methods are occasionally preferred,⁶ the simplest remains the Estlander flap.

The Estlander flap was first described by Estlander, a Finn, in 1872; although the principle was discovered in 1848 by Stein, a Dane, and used in a somewhat different type of flap, one later popularized by Abbé (1898).⁷ The success of these flaps is based on the finding that a large, vermilion bordered flap can be carried successfully on a narrow pedicle of vermilion alone if the coronary artery is preserved and allowed to run through this pedicle to supply the flap. These coronary arteries (A. Labialis superior and inferior), can be easily identified by their pulsations which are readily felt because they lie just beneath the mucous membrane on the oral side of the vermilion border as it encircles the mouth. As long as pulsations can be felt in the pedicle and the color of the flap is good, it does not seem to be necessary to further establish the presence of a venous return.

The Estlander flap is indicated in defects of the lips such as those resulting from the correction of harelip deformities and from electrical burns of the mouth^{8,9} as well as from resections for carcinoma. It should be noted that where, for example, a defect of two thirds of

*Plastic Surgeon, Eastern Maine General Hospital, Bangor.



FIG. 1. CASE 1



FIG. 2. CASE 1

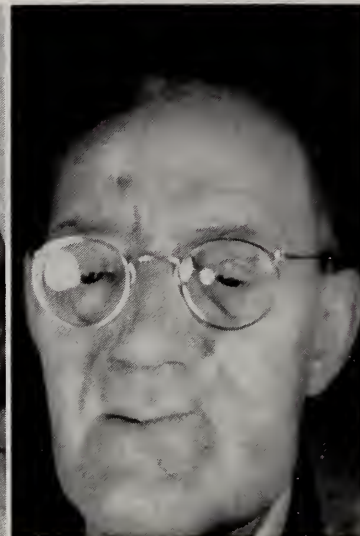


FIG. 3. CASE 1



FIG. 4. CASE 1

FIG. 1. Case 1. Immediate preoperative photograph showing ulcerating lesion on left side of lower lip (squamous cell carcinoma, Grade IV). The area about the lesion to be excised is outlined as is also the site of the Estlander flap. The

arrow drawn in, indicates the direction taken by the flap when swung into place in the lower lip.

FIG. 2. Case 1. Immediate postoperative photograph showing Estlander flap sutured in

place and donor site closed. The incision for the suprahyoid neck dissection is also shown.

FIG. 3. Case 1. Photograph taken 12 days postoperatively showing appearance after Estlander flap operation.

FIG. 4. Case 1. Same as Fig. 3, but with mouth open. Note microstoma. Mouth function would be sufficiently improved to warrant enlargement operation in this case.



FIG. 5. CASE 2



FIG. 6. CASE 2

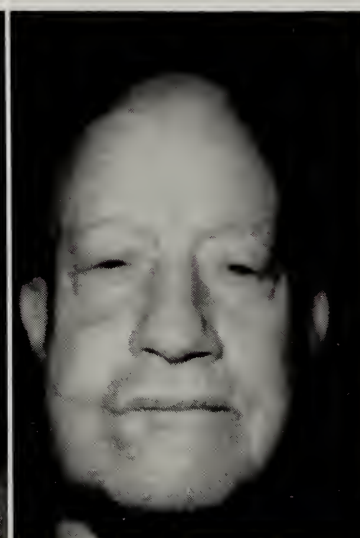


FIG. 7. CASE 2

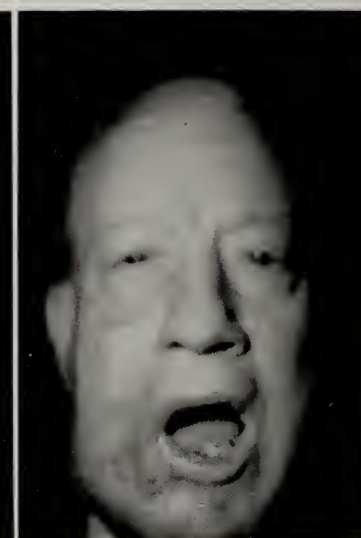


FIG. 8. CASE 2

FIG. 5. Case 2. Preoperative photograph showing crusted lesion on right side of lower lip (squamous cell carcinoma, Grade II). The area about lesion to be excised is outlined as is also the site of the Estlander flap.

FIG. 6. Case 2. Photograph taken three days postoperatively showing Estlander flap sutured in place and donor site closed. The incision for the submaxillary gland and node excision is also shown. The ecchymosis about the face is the result of

subcutaneous postoperative hemorrhage in the submaxillary gland area.

FIG. 7. Case 2. Photograph taken 17 days postoperatively showing result of Estlander flap operation.

FIG. 8. Case 2. Same as Fig. 7, but with mouth open. Note that size of mouth opening is sufficient in this case. No enlargement operation is indicated.



FIG. 9. CASE 3

FIG. 9. Case 3. Photograph of 5-year-old boy taken 4 months following electrical burn of left corner of mouth. Note microstoma. The mouth was too small for dentist to work on teeth. The mouth enlargement operation was performed two months after this



FIG. 10. CASE 3

photograph was taken. (This was not an Estlander flap procedure.)

FIG. 10. Case 3. Photograph taken 8 months postoperatively showing satisfactory result of simple mouth enlargement (not Estlander flap) operation.

the lower lip is to be supplied from the upper lip, only half of the width of this defect or one third of the lip width should be taken from the upper. The result is that both lips will then be of two thirds normal length instead of one being of normal length, and the other of one third normal length. When defects of the lips are greater than can be compensated for by an Estlander flap; i.e. greater than about two thirds of the width of a lip, one must resort to more complicated procedures, such as the extensive use of cheek flaps,¹⁰ or by the use of skin supplied from a distance by pedicle tube flaps.^{5,11}

If the mouth is too small after an Estlander flap operation, it may be enlarged by an incision into the angle (with or without excising a small triangle of skin from the cheek) and the formation of a new section of vermillion border which is effected by rolling out the mucous membrane.^{5,12} Case 1 would probably benefit from such a procedure (see Fig. 4). Two photographs are shown to illustrate the result of enlarging, in this way, the mouth of a young boy with microstoma following an electrical burn. (No Estlander flap had been made in this case). See Figs. 9 and 10.

CASE REPORTS

Case 1. A male, 60 years old. Admitted to St. Joseph Hospital, Bangor, on January 14, 1959 and discharged on January 27, 1959 as improved. He complained of an ulceration on the lower lip of 3½ months duration, growing steadily larger. The lesion was first noticed when the lip was "cracked" during the removal

of teeth. The patient had been a pipe smoker up to ten years ago, but had held the pipe on the right side (the sound side) of his mouth "as a rule." For the past ten years he had been a cigarette smoker (about 15 a day). There has been no previous irradiation.

Examination revealed a normal appearing male of 60, healthy except for a rather deep ulceration of the left side of the lower lip measuring 2¼ cm by 1¼ cm by ¾ cm. The edges of the ulcer were indurated and the base contained necrotic material. Palpation of the cervical nodes showed slight enlargements in both the submental and submaxillary triangles.

Biopsy of the lip lesion taken twelve days prior to admission showed: "Squamous cell carcinoma, Grade III, lower lip." Preoperative x-ray examination of the mandible was negative for metastases.

On January 15, 1959, the lip lesion was removed by wedge resection through the full thickness of the lip and with a margin such that the defect comprised nearly two thirds of the original lip width. The defect was corrected by an Estlander flap using nearly one third of the upper lip in its preparation. A left unilateral suprahyoid neck dissection, including the submental triangle, was also done.

The pathological diagnosis read: "Squamous cell carcinoma, Grade IV, lower lip, with invasion of muscle. No metastases in 3 lymph nodes. Salivary gland showing no active pathology."

Convalescence was uneventful. When the patient was last seen on July 9, 1959, the operative sites were well healed and he was apparently in good health and

free from metastases. There was a distinct microstoma present but this was not bothering the patient sufficiently for him to desire correction at the time.

See Figs. 1 through 4.

Case 2. A male, 73 years old. Admitted to the Eastern Maine General Hospital on May 4, 1959 and discharged on May 15, 1959 as improved. He complained of the persistence of a crusted area on the lower lip of one year's duration, growing larger very slowly. The lesion had begun spontaneously as a tiny "scab." The patient had never smoked. There had been no previous irradiation.

Examination revealed a male of 73 years, normal appearing for his age, and healthy except for a moderate hypertension and a crusted area on the right side of the lower lip which measured $1\frac{1}{4}$ cm by $\frac{3}{4}$ cm. In addition to this crusted area there was a narrow grayish strip of thickened mucous membrane running along the rest of the length of the lower lip. This latter was considered to be leukoplakia. Palpation of the cervical nodes revealed a soft, diffuse enlargement in the right submaxillary gland area, but no other palpable masses. The submaxillary area enlargement was thought to be inflammatory, but pathological examination still desirable.

Biopsy of the lip lesion on April 17, 1959 had shown: "Squamous cell carcinoma, Grade III, lower lip." Pre-operative x-ray examination of the mandible showed dental root pathology but no definite metastatic involvement.

On May 5, 1959, the crusted lesion was removed by wedge resection of the lip with a margin. In addition a lip-shave procedure was performed on the rest of the lower lip to get rid of the precancerous area (the strip of leukoplakia); and finally, the right submaxillary gland and nodes were excised in one piece.

The pathological diagnosis read: "1st specimen, squamous cell carcinoma, Grade II, lower lip; 2nd specimen, atypical squamous cell hyperplasia of border of lower lip; 3rd specimen, essentially unaltered submaxillary gland. Two negative lymph nodes."

Convalescence was uneventful. When the patient was last seen on May 22, 1959, the operative sites were well healed and the patient was in apparent good health. There were no complaints and the mouth was functionally and cosmetically acceptable.

See Figs. 5 through 8.

SUMMARY

Losses of from between one third and two thirds of the width of the lower lip following resection for cancer are common. The simplest way to correct such a loss is by means of a one stage operation utilizing an

Estlander flap. This operation may be combined with other procedures such as a radical neck dissection or a "lip-shave" where indicated. Two illustrative cases are presented.

The Estlander flap may be also employed in the correction of mouth defects secondary to operations for harelip and following electrical burns.

Losses of less than one third of the lip do not usually need flap reconstruction, whereas those of greater than two thirds require more than the simple Estlander flap. In the latter event extensive cheek flaps may be used or tube pedicle flaps prepared for the transportation of skin from a distance.

When microstoma results following an Estlander flap operation, the mouth can readily be enlarged at a second procedure.

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205 French Street, Bangor.

Pre-Pernicious Anemia

A Neglected Clinical Entity?

MASON TROWBRIDGE, JR., M.D.* and RICHARD C. WADSWORTH, M.D.**

... tragic errors may occur if pernicious anemia is not considered when organic brain disease is encountered.

Although the development of pernicious anemia can be fulminating, the anemia may be preceded by months or even years of poor health. It has been known for more than fifty years that the central nervous system changes could precede the hematological changes. There is, however, not a general awareness that pernicious anemia can exist not only with a normal peripheral blood picture but with a bone marrow picture that is not diagnostic. For many years there has been interest in the "pre-anemic" or "larval" state, and treating these patients would be eminently worthwhile. There is no other potentially fatal disease than can be treated so readily, that cannot be overtreated, and in which the need for treating the patient can now be determined with certainty in almost every case. Waiting until a patient develops gastrointestinal symptoms, paresthesias, and glossitis has been likened to waiting for tabes dorsalis or a Charcot joint to develop instead of treating syphilis early. There is a reason why many patients with pernicious anemia are not treated in the early stages. Except in those few medical centers in which serum B12 levels are done, one must either wait for the development of the clinical disease or treat a considerable number of patients needlessly. It has been stated that nearly every anemic patient, except those with pernicious anemia, is getting vitamin B12 shots. Opinion is sharply divided as to whether an asymptomatic patient whose sole abnormality is the demonstration of his inability to absorb radioactive vitamin B12, because of lack of intrinsic factor, should be treated. The value and significance of the Schilling test will be discussed below.

IS PERNICIOUS ANEMIA COMMON ENOUGH TO EXPEND EFFORT IN SEEKING CASES?

There is obviously not the urgency in picking up early cases of pernicious anemia that there is with some serious diseases that are either infectious or in which an early diagnosis is vital for a cure. The incidence of the disease is influenced by age, nutrition, ethnic origin and other factors, but a conservative estimate is that one

person in 1400 in the United States has a well documented diagnosis of pernicious anemia. If attention is directed to certain groups of patients, however, the search for new cases may be more rewarding. The disease is rare in young people. Attention can therefore be focused on older achlorhydric individuals, particularly if they have anemia or evidence of organic disease of the brain, spinal cord, or peripheral nerves. The diagnosis should be considered in any anemic adult. Furthermore, since pernicious anemia is a familial disease, the greatest attention should be paid to siblings and older children of patients known to have this disease. This subject has recently been discussed in the June 1959 *Bulletin of the Johns Hopkins Hospital* with an extensive bibliography. In that series no new cases of pernicious anemia were found among 106 relatives of known pernicious anemia patients, but relatives of all ages were studied and the subjects have not been followed for a period of years. The high incidence of abnormal Schilling tests, even in the presence of free HCl in the stomach, suggests that, as in most other studies of pernicious anemia relatives, the disease will develop among certain relatives.

The work of McDonald Holmes in England and others shows that tragic errors may occur if pernicious anemia is not considered when organic brain disease is encountered. It may be present in the absence of spinal cord disease. Since pathologic changes may develop in a few days, central nervous system pernicious anemia is a medical emergency. Diagnosis of the disease in the pre-anemic state is vital. The high incidence of brain involvement is not appreciated, chiefly because the psyche is not investigated carefully when a patient is pleasant and cooperative and gives a reasonably good history. Electroencephalography, showing changes other than those of anemia alone, plus simple tests such as serial subtraction of seven from 100 and the simple expedient of retaking the history on successive days, demonstrate the brain involvement. Early diagnosis is important so that the patient can be treated during the period when there is only a biochemical lesion. Routine serum B12 levels in patients with organic dementia enabled Holmes to detect a number of patients with latent pernicious anemia. Since this study was not car-

*Medical Service, Eastern Maine General Hospital, Bangor.

**Laboratory Service, Eastern Maine General Hospital, Bangor.

ried out systematically on a large scale, the incidence of pernicious anemia among mental hospital populations is not known. A patient with myxedema presenting as a psychosis will often show some clinical evidence of the true diagnosis, whereas one with pernicious anemia may not.

DOES FAILURE OF EARLY DETECTION PRODUCE SERIOUS CONSEQUENCES?

Opinion is divided as to the extent of the damage to the nervous system when pernicious anemia is allowed to progress without treatment. Little relevant data is available, since psychometric tests of the patient prior to development of the disease are not usually available. Mental deterioration may not be corrected by therapy. This is to be expected since the pathological changes in the brain and spinal cord are similar. If spinal cord disease has been present for six months, the prognosis for reversing it with therapy is not good. Even if there were no danger of brain damage, failure to make the diagnosis early might cause the patient suffering, needless investigation and perhaps even needless surgery when the presenting complaint is abdominal pain. Particularly tragic are cases of siblings of pernicious anemia patients who have declined to have gastric analysis or routine examinations so that the diagnosis may be made early. These individuals have waited until the anemia and neurological changes were well advanced, chiefly because the development of symptoms is so insidious. Crippling spinal cord changes have resulted, or the above-noted irreversible brain damage has occurred. One able business executive lost his ability to make simple decisions. For many years a few physicians have been advocating routine liver or vitamin B12 therapy for all achlorhydric relatives of known pernicious anemia patients. That such therapy will also prevent the development of gastric polyps and carcinoma has not been demonstrated. Cases of pernicious anemia in children without gastric changes are being followed with mucosal biopsy in order to throw light on this question.

There is some evidence that the gastritis of pernicious anemia will improve with therapy, so that if there is evidence of vitamin B12 deficiency from any cause, the patient should be treated.

IMPORTANCE OF DISTINGUISHING PERNICIOUS FROM OTHER VITAMIN B12 DEFICIENCY STATES

Lack of intrinsic factor and resulting malabsorption is the commonest cause of the failure of vitamin B12 to reach the tissues, but there are a number of other physiological and anatomical barriers to the absorption of the vitamin. A typical megaloblastic anemia may develop on a vegetarian diet although it rarely does in adults. The anemia of *dibothriocephalus latus* infestation has been shown to be due to the avidity of the worm for B12. In studies using Cobalt⁶⁰ labeled B12 the worm is really "hot" when recovered. Intestinal

**An annular carcinoma of the colon that
does not bleed or obstruct can produce a
hematologic picture indistinguishable
from true pernicious anemia.**

bacteria, under conditions allowing stasis of intestinal contents, will also rob the host of the vitamin. Such conditions may accompany diverticula, strictures, blind loops, and annular lesions anywhere from the jejunum to colon. A temporary remission of the anemia usually occurs with the use of antibiotics.

Thus an annular carcinoma of the colon that does not bleed or obstruct can produce a hematologic picture indistinguishable from true pernicious anemia. Complete G.I. x-ray studies of all megaloblastic anemia patients should be done. Another reason for these studies is the high incidence of gastric carcinoma in pernicious anemia patients. Whether pernicious anemia patients should have annual x-ray studies and gastric cytological studies is debated widely.

Reports of megaloblastic anemia caused by the use of several hydantoin-type anticonvulsants are increasing. The mechanism of this anemia is obscure, some suggesting an antimetabolite action of the drug. Whether this anemia is caused by a disturbance of vitamin B12 or folic acid metabolism has not been determined, nor is there unanimity as to whether the drug must be stopped.

Vitamin B12 is absorbed by the distal ileum. Thus, if this section of the gut has been resected, the body supplies of vitamin B12 will be depleted in 5 to 7 years and a typical pernicious anemia picture will develop. They are also gradually depleted after total gastrectomy, for the stomach is the only source of intrinsic factor. Diseases of the distal ileum may impair absorption as in sprue. Giving intrinsic factor or antibiotics will not aid in increasing the uptake of the vitamin.

Several other clinical entities have been described in which the bone marrow is unable to utilize B12 or in which there is an inability of the serum globulin to bind B12. In the latter case the anemia was corrected by a small amount of plasma; inability to hold on to the B12 was demonstrated by most of the isotope being recovered in the urine when the Schilling test was done. Several authors have suggested that some patients may have a defect in the B12 acceptor mechanism in the distal ileum with resulting B12 deficiency.

Obviously it would be disastrous to confuse some of these vitamin B12 deficiency states with true pernicious anemia. The annular carcinoma of the colon which does not bleed has been mentioned, and pernicious anemia with a hemorrhagic tendency and abdominal pain can simulate an obstructing lesion of the bowel. It would also be unfortunate to initiate a program of seeking other cases among relatives of the patient if the

disease were due to one of the mechanisms mentioned above.

IS PERNICIOUS ANEMIA A SINGLE DISEASE?

Several authors feel that families of pernicious anemia patients should be apprised of the existence of the disease in the family, just as one would do with epilepsy and other familial disorders. But whereas some studies of relatives of pernicious anemia patients show a high incidence of the disease, others do not. This suggests the possibility that one is dealing, in reality, with two or more superficially similar states of vitamin B12 deficiency. Further evidence for this is the marked difference of speed of development of the disease, marked variations in the time of relapse after cessation of therapy, and varying response to therapy. The situation may be much the same as in diabetes where one is forced to the conclusion that there are at least two clinical entities, the mechanism for which is obscure. Competent investigators differ in their opinion as to the characteristics of intrinsic factor, some denying its existence entirely, and others feeling that there is an isoimmunization mechanism that inactivates intrinsic factor. The idea that there is also a specific protein deficiency in the diet predisposing to pernicious anemia recurs in the literature.

One would feel more confident in recommending that relatives of pernicious anemia patients be followed over the years were one certain of the exact biochemical defect and its inheritance. Fortunately, intensive work is being done on the blood groups of pernicious anemia patients, the nature of the disturbance of uric acid metabolism, and in the disturbed physiology of the stomach in this disease. It seems certain that other practical methods of determining more precisely the nature of the derangement of vitamin B12 metabolism will be forthcoming if what we now consider to be pernicious anemia proves to be two or more clinical entities.

HOW CAN ONE ARRIVE AT THE DIAGNOSIS OF PERNICIOUS ANEMIA?

The wide use of the Schilling test (see below) during the last decade has caused some physicians to omit some of the time tried laboratory tests for the diagnosis of pernicious anemia. This is a great mistake. The Schilling test has pitfalls, and when borderline values are occasionally encountered the clinician must rely heavily on such criteria as red cell morphology. The test also involves the use of a large parenteral dose of non-radioactive vitamin B12; bone marrow and other studies should be done before the Schilling test.

A common problem is that of the patient with a normal hemogram who has been receiving regular vitamin B12 injections. Determining whether the patient has pernicious anemia by stopping therapy and observing the blood count is both unreliable and dangerous. If the patient has pernicious anemia a relapse may take place within a few weeks, but the patient may go for

some years without a hematological relapse. One patient presented himself to Dr. Castle's group with a red blood count of 800,000. He received one injection of liver extract and felt so much better that he did not return for medical attention for five years. Other groups who have observed pernicious anemia patients on whom therapy has been stopped have noted that relapses may not occur for some years.

THE SCHILLING TEST

It was learned shortly after the development of Cobalt⁶⁰-labeled vitamin B12 that pernicious anemia patients absorbed virtually none of the radioactive material. Almost the entire ingested dose could be recovered in the stools over a period of some days. But this was difficult to do, and initially the radioactivity of urine was not measured since after a dose of the magnitude of 0.5 microcuries of this isotope no radioactivity was detectable in the urine. But Schilling devised the ingenious method of giving the patient a massive parenteral dose (1,000 mcg.) of non-radioactive vitamin B12, the "flushing dose," some hours after ingestion of the isotope. Normal persons excrete 10 to 25% of the ingested dose in the urine over a 24 hour period, whereas pernicious anemia patients excrete 0 to 4%. When the test is repeated with intrinsic factor given at the same time as the radioactive vitamin B12, the excretion is several times greater in patients with a deficiency of intrinsic factor.

Unfortunately Cobalt⁶⁰ has a half-life of 5.3 years, a biological life of roughly a year, and emits gamma rays. There is understandable hesitation about giving this isotope to patients in the reproductive age group. Cobalt⁵⁷ has also been used to label vitamin B12 for the Schilling test, but it is less widely used and slightly more expensive. The half-life of this isotope is 72 days, and the character of its emissions renders counting easier with the usual type of scintillation detector and scaling equipment. A much smaller dose of the isotope can be used if the cobalt of the 24 hour urine specimen is precipitated and concentrated before being counted. Some increased excretion of the isotope can be achieved by giving the flushing dose intravenously and by giving repeat flushing doses on subsequent days. If the test is to be repeated with intrinsic factor, the patient should be thoroughly flushed for two or three days. There is much debate as to the rapidity of decay of the vitamin B12 molecule, so that the short shelf-life of the 72 day half-life isotope may not be as great a disadvantage as previously thought. The problem in counting the radioactive urine in the Schilling test is that the radioactivity is not sufficiently increased over the background count to allow highly accurate counts during short counting periods. Refinements in nuclear counting equipment such as the pulse height selector will do much to remedy this problem. When minute doses of an isotope of cobalt with a short half-life can be used, the Schilling test will be more widely used.

If pepsin is present, there is probably no immediate danger of the patient developing pernicious anemia.

Scanning the liver for radioactivity following ingestion of the radioactive B12 after purging the intestines is chiefly of value in demented patients and on occasions when the urine has been discarded.

A few groups are still hesitant to use Cobalt⁶⁰ labeled vitamin B12 at all, whereas others use it routinely on all patients both with a definite or a suspected diagnosis of pernicious anemia. Unless given intrinsic factor a pernicious anemia patient will absorb virtually no radioactive material. The Schilling test is the only means by which one can determine whether a patient receiving therapy really has pernicious anemia. (It can be performed 48 hours after the last injection of vitamin B12). When good absorption is demonstrated, many fruitless days of waiting for a reticulocyte response will be avoided. When the differential diagnosis of a difficult hematological, gastrointestinal, or neurological problem is between pernicious anemia and a neoplasm which should be treated promptly and vigorously, it is often helpful to know within 24 hours and with absolute certainty that the patient does not have pernicious anemia.

Since only a few large centers have had much experience with the Schilling test, regardless of whether it is positive or negative, the reticulocyte response of the patient to the 1,000 mcg. flushing dose should be observed. Any group contemplating use of the Schilling test would do well to observe the manner in which an experienced group is using it. Thus, such pitfalls as having urine contaminated with stool will be avoided. One will learn to use with caution on the wards the term "flushing dose"; an overenthusiastic nurse may force fluids causing the isotope laboratory to receive several liters of urine of minimal radioactivity. The chief cause of false positive tests (aside from loss of part of the 24 hour specimen) is renal insufficiency. If this is present, urine can be collected over a period of several days. If the patient is acutely ill and pernicious anemia is suspected, parenteral vitamin B12 may be used and the test carried out at a later date.

VALUE OF PEPSIN STUDIES IN EXCLUDING PERNICIOUS ANEMIA

Since a patient without pernicious anemia will usually absorb the radioactive vitamin B12 it would be desirable to have some other test by which pernicious anemia could be excluded. Varying degrees of enthusiasm have been shown for uropepsin and blood pepsin determinations by gastroenterologists. There is general agreement that, with rare exceptions, all patients with pernicious anemia secrete little or no gastric pepsin, although all patients with low pepsin levels in blood or urine do not have pernicious anemia. Several authors have suggested that a significant pepsin level could be

used to rule out pernicious anemia. As pernicious anemia develops in a patient there is apparently first achlorhydria, then failure of pepsin secretion, and then absence of intrinsic factor. The range of uropepsin levels is either 0 or so far below that of normal patients that the error introduced by merely testing morning samples of urine does not invalidate the test. Pepsin levels are not at the present time being determined in Bangor. A simple qualitative procedure for the office determination of uropepsin is being developed elsewhere. If this does not prove satisfactory as a pernicious anemia screening test, the standard quantitative method of determining uropepsin levels will be used.

OPPORTUNITY FOR STUDY OF FAMILIAL PERNICIOUS ANEMIA IN EASTERN MAINE

Eastern Maine not only has a population of much older average age than the rest of the country, but also has a relatively stable population. The sociological changes which have produced such great population movements elsewhere in the United States have produced relatively little change in this section of Maine. There are still large, closely knit family groups who keep in touch with relatives in other parts of the country. Elsewhere investigators studying familial blood diseases have found that relatives of a patient are willing to give a blood or urine sample but are usually unenthusiastic about coming to a hospital or clinic for further study. However, if an abnormality of the blood is demonstrated, both the patient and the family doctor are more than willing to have further studies carried out. The relatives and family physicians of a number of pernicious anemia patients both in Maine and elsewhere in New England have been approached. All have been most cooperative so far.

PROPOSED PLAN FOR INVESTIGATION OF FAMILIAL PERNICIOUS ANEMIA IN EASTERN MAINE

When a well documented diagnosis of pernicious anemia is made, a careful family history will be taken. This will include not only the names and addresses of close relatives, but the names of their family physician. The family physician will be notified of the fact that pernicious anemia exists in the family. The suggestion will be made that a urine sample be sent to Eastern Maine General Hospital or tested elsewhere for uropepsin. If pepsin is present, there is probably no immediate danger of the patient developing pernicious anemia. If pepsin is low and an otherwise unexplained physical or emotional disturbance develops, pernicious anemia should be considered if the patient is achlorhydric by the Diagnex Blue test or standard gastric analysis. This should always be preceded by histamine or similar preparation. The caffeine preparation in the Diag-

nex Blue kit is not an adequate stimulus of gastric secretion for the exclusion of pernicious anemia. If indicated, the Schilling test, along with bone marrow aspiration and routine hematological studies and a G.I. series can be carried out.

SUMMARY

The diagnosis of pernicious anemia may be difficult if there is no marked abnormality of the peripheral blood or bone marrow.

It is hoped that careful study of the families of pernicious anemia patients will enable physicians to make the diagnosis earlier and thus avoid several months or years of poor health and possible crippling irreversible neurological disease.

The value of the Schilling test (ability to absorb radioactive vitamin B12) is discussed. A method of excluding the diagnosis of pernicious anemia by pepsin studies without recourse to radioactive material is discussed.

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THE NORMAL ABDOMEN IN YOUNG PEOPLE

To determine which abdominal organs are palpable in normal people, the abdomens of 100 healthy male medical students and 100 female student nurses (18-24 years of age) were examined: The descending colon and caecum were felt in most subjects. The wall of the abdominal aorta was felt in most females, but in only about half the males. The liver was felt in only 11 women and 2 men. The right kidney was felt in 11 women but in none of the men; the reason why it is so rarely palpable is the thickness and resistance of the soft tissues and not its position. Other abdominal organs are not normally palpable. — J. G. Bearn, M.B., and T. R. E. Pilkington, M.D., Organs Palpable in the Normal Adult Abdomen, *Lancet*, Aug. 29, 1959.

Viral Hepatitis — Etiology Of An Outbreak

H. BRUCE DULL, M.D.*

WILLIAM J. CARNEY, M.S.P.H.**

**Unless one case occurs in some reasonable relationship to others,
it is often impossible to do more than suspect the etiology
of the hepatitis as either virus A or B.**

INTRODUCTION

During January and February of 1959, eight jaundiced individuals were observed in Bangor, with histories and clinical impressions of such unique nature that an epidemiological consultation was requested from the United States Public Health Service by the City of Bangor and the Hospital Advisory Committee. The results of the study are herewith presented, stressing some epidemiological differences between the causes of jaundice, and emphasizing the continued need for aseptic technique.

Jaundice is a sign of a malfunctioning liver which may be due to a variety of causes, some infectious, others not. Viral hepatitis is an infectious form, due to agents not yet identifiable, presumably viruses, that cause liver damage which may result in jaundice. At the present time, two types of viral hepatitis are recognized. The term viral hepatitis A is now applied to the more frequently occurring "infectious hepatitis," which is usually of intestinal origin with incubation periods ranging from 10 to 50 days. The term viral hepatitis B is applied to the disease formerly called "serum hepatitis" which occurs from 60 to 160 days or more after a person is inoculated with infectious material.

VIRAL HEPATITIS A AND B

It is now generally accepted that hepatitis virus A and B are immunologically distinct.¹ Only within the past quarter century have observations of hepatitis B begun to suggest its important distinctions from the more common infectious form, hepatitis A. Even now, because of the marked clinical similarity of individual cases of the various viral hepatitis, the investigator often must depend entirely on epidemiological data for differentiation. Unless one case occurs in some reasonable relationship to others, it is often impossible to do more

than suspect the etiology of the hepatitis as either virus A or B.

The differences tabulated in Table I, a modification of charts from three sources,^{1,2,3} characterize the two viral hepatitises ordinarily encountered. It must be recognized that exceptions to this table exist. The principal difficulty in being more definitive as to the cause of viral hepatitis and its differential criteria is that, to date, experimental work with laboratory animals, tissue culture and serological tests, has failed to isolate or identify completely the etiological agent. Present knowledge, therefore, must be based on retrospective studies or experimentation with human volunteers, with due consideration to the limitations these methods impose.

HEPATITIS DUE TO VIRUS A

Virus A is found in both the feces and the blood. It produces disease after an incubation period ranging from 10 to 50 days, with an average of 25 days. Most cases occur between the ages of 5 and 14. Outbreaks are common in military service and institutionalized populations. The intestinal-oral route is the principal pathway of person to person transfer of infectious fecal material, with explosive outbreaks resulting when water, food or milk are contaminated with the infectious agent.

Since the virus is also present in the blood, cases may result from parenteral transmission.

HEPATITIS DUE TO VIRUS B

Virus B has been demonstrated only in the blood. It produces disease after an incubation period ranging from 60 to 160 or more days, with an average of about 100 days. The onset of clinical disease is usually afebrile and insidious with a prolonged prodromal phase, which presents difficulties in establishing a definite incubation period.

Transmission of virus B may be accomplished only by its parenteral introduction into a susceptible host. This may occur when infectious human serum is used

* Assistant Chief, Surveillance Section, Epidemiology Branch, Communicable Disease Center, Public Health Service, U.S. Department of Health, Education and Welfare; Atlanta, Georgia.

** City Health Officer, Bangor, Maine.

TABLE I
OBSERVED DIFFERENCES BETWEEN HEPATITIS VIRUS A AND B

SYNONYMS FORMERLY USED		HEPATITIS	
		VIRUS A	VIRUS B
		Infectious hepatitis catarrhal jaundice epidemic jaundice	serum hepatitis homologous serum jaundice transfusion jaundice post-vaccinal jaundice
1. INCUBATION PERIOD	Range Average	10-50 Days 25 Days	60-160 Days 100 Days
2. TYPE OF ONSET		Acute, Febrile	Insidious, Afebrile
3. ROUTE OF INFECTION	(Experimental) Intestinal-oral Parenteral	Yes Yes	No Yes
4. VIRUS PRESENCE	Feces Blood	Yes Yes	No Yes
5. DURATION OF INFECTIVITY (Typical Adult Cases)	Feces	From one to two weeks before symptoms, until three to four weeks after onset of symptoms	None demonstrated
	Blood	From two weeks before symptoms, until three to four weeks after onset of symptoms	From three months before symptoms, persisting into the acute phase*
6. AGE DISTRIBUTION		Children and Young adults	Any age
7. SECONDARY CASE RATE		5 to 42%	None
8. PROPHYLAXIS WITH IMMUNE GLOBULIN		Yes	No

*Prolonged asymptomatic carrier states have been demonstrated for 5 years.

in the preparation of a product introduced parenterally; when an infected individual becomes a blood donor; or when multi-use instruments are contaminated by infectious blood or blood products, and used again without adequate sterilization.

EPIDEMIOLOGY

The principal epidemiological tools used to distinguish virus A infections from those caused by virus B are the mode of transmission and the incubation period. Other factors to be considered are:

A. *Seasonal Variations.* Although common source outbreaks of virus A can occur at any time, the major incidence usually occurs in the fall and early winter.⁴ Since virus B may be transmitted only by parenteral means, it does not readily acquire a seasonal pattern.

B. *Secondary Case Rate.* In common with other diseases having an intestinal-oral mode of transmission, secondary cases of hepatitis A frequently occur with rates up to 40%. The parenteral mode of transmission of hepatitis B does not result in a secondary case rate.

C. *Differential Diagnosis.* All jaundiced individuals must be evaluated by clinical, laboratory and epidemiological means to distinguish between:

(1) hemolytic jaundice, either congenital or acquired;

(2) intrahepatic jaundice, resulting from infection, exposure to toxic materials, cirrhosis of the liver, or primary and metastatic carcinoma of the liver;

(3) obstructive jaundice due to obstruction in the biliary tract by a calculus or neoplasm.

The following report of the Bangor outbreak exemplifies these epidemiological principals.

ETIOLOGY OF AN OUTBREAK

During January 1959, two adult men were admitted to the Eastern Maine General Hospital, Bangor, deeply jaundiced, presenting clinical histories and laboratory findings of acute hepatitis. Careful epidemiological interviews revealed that neither man had known exposure to hepatitis or to hepatotoxic agents, nor had any member of either patient's family contacted known hepatitis, or had themselves shown any suspicious illnesses in the recent past. Each of the men, however, was a patient of the same physician and had received a considerable number of routine weekly therapeutic injections during the preceding six months.

During the following weeks and continuing for six

TABLE II

EIGHT CASES OF HEPATITIS IN ADULTS

Case	Age	Sex	Onset Symptoms	Onset Jaundice	Duration Jaundice	Hepatitis Contacts	History of Injections	Hepatotoxin Exposure
1	49	M	Dec. 1	Dec. 27	13 Weeks	No	Yes	No
2	59	M	Dec. 15	Dec. 25	5 Weeks	No	Yes	No
3	37	M	Dec. 15	Dec. 30	15 Weeks	No	Yes	No
4	36	M	Dec. 21	Dec. 25	9 Weeks	No	Yes	No
5	55	F	Jan. 15	Jan. 22	10 Weeks	No	Yes	No
6	29	M	Jan. 31	Feb. 12	11 Weeks	No	Yes	No
7	42	F	Feb. 1	Feb. 4	12 Weeks	No	Yes	Yes*
8	64	F	Feb. 1	Feb. 15	5 Weeks	No	Yes	Yes†

*Three days of oral methyl testosterone prior to onset.

†Six months of daily thorazine one month removed from onset.

months, a detailed survey was organized among area hospitals, physicians, school health personnel, and clinical laboratories. All suspect cases of hepatitis were evaluated individually and were considered in relationship to those already known.

The initial survey of physicians revealed six other cases of probable acute hepatitis, all adults with recent jaundice. Careful interviews with each of them showed that none had had any contact with known hepatitis or with each other, but had been receiving routine injections of various medications from the same physician who had treated the first two men hospitalized with hepatitis.

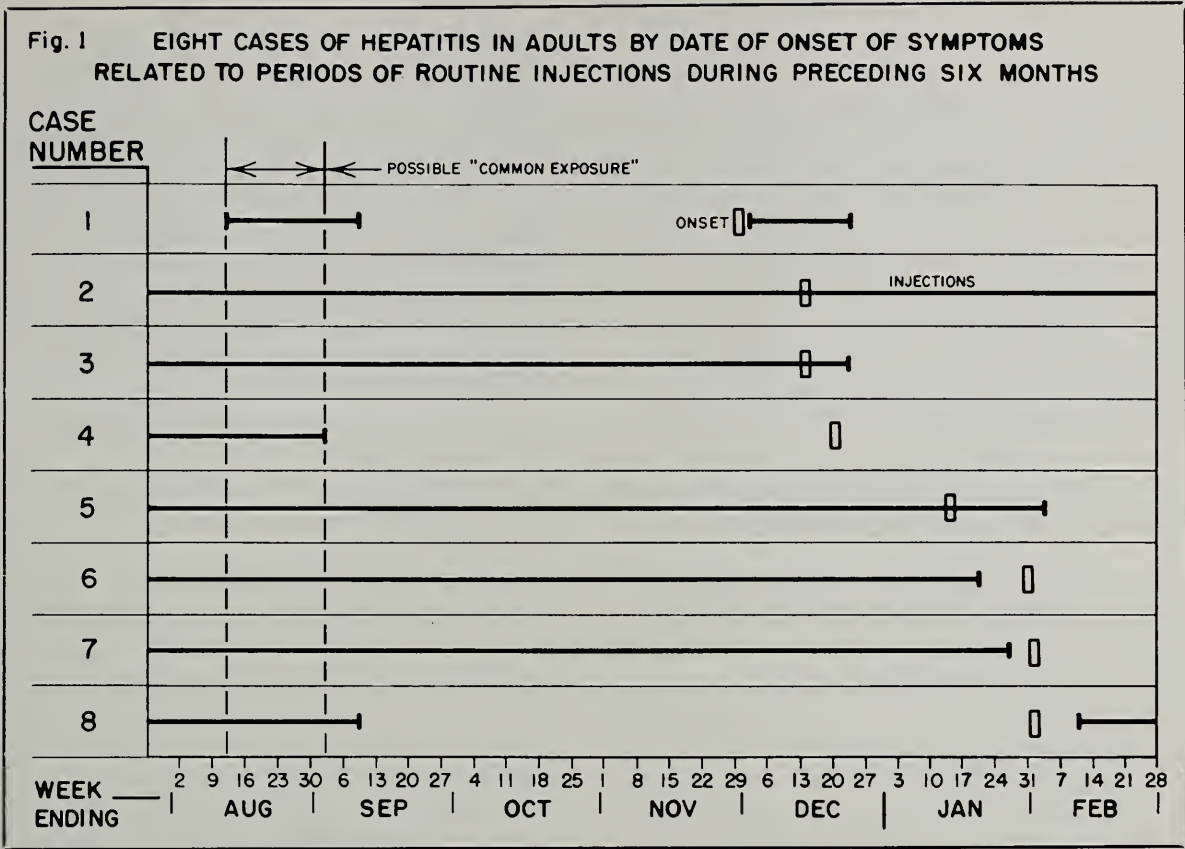
In all eight cases, onset of symptoms was quite gradual, being characterized predominately by malaise, anorexia, and mild nausea, occasionally with vomiting as the illness progressed. There were no fever or chills, no headache or myalgia, however, lassitude and anorexia with associated weight loss continued throughout the prolonged illness. Jaundice appeared roughly one to two weeks or more after onset of symptoms, but because of the retrospective character of the interviews conducted in February and the insidious nature of the disease, much of the dating of the illness progression is necessarily approximation.

Table II summarizes the significant epidemiological and clinical findings in the eight cases which support the diagnosis of hepatitis B. It is of interest to note the ages of cases which range from 29 to 64, the average 46. While adult cases do occur in outbreaks of infectious hepatitis A, it would be most unusual to find only adults affected, this form of the disease being more commonly described among children. Table II also points out the lack of known contacts with hepatitis A and the absence of associated family cases, although none of the family members was protected with immune globulin. As suggested by the prolonged durations of jaundice ranging from 5 to 15 weeks, the average nearly 10, the illnesses were in most cases quite severe with considerable hepatic dysfunction. Serial laboratory follow-up of half of the

cases confirmed the patient's histories of long periods of jaundice.

In two of the cases, numbers seven and eight, while there had been exposure to potentially hepatotoxic medications, it is difficult to explain the jaundice on this basis. In case 7, oral methyl testosterone had been administered for three days prior to onset of symptoms (six days before jaundice appeared). Medical literature reports less than 25 cases of methyl testosterone-associated jaundice, most of them in patients who had exposure to the drug for several months before symptoms occurred. As for possible Thorazine® induced jaundice in case 8, among the large number reported, no cases have been noted where patients had successfully received the drug for more than 60 days, the great majority of cases having occurred with less than 20 days exposure. Case 8 had been given the drug for at least six months prior to her illness and had discontinued the medication one month before symptoms occurred. Several months after recovery from hepatitis, she again was given Thorazine. When the period of surveillance was concluded, at the end of August 1959, she had been receiving the medication daily for more than three months without symptoms or jaundice. In neither of these cases can one prove conclusively that the potentially hepatotoxic drugs did not produce jaundice, but it is more reasonable to explain the hepatitis in terms of the epidemiological relationships presented in Figure I.

The schematic representation of the eight cases of hepatitis in Figure I shows the onset of symptoms related to the preceding six-to eight-month period when, in each instance, routine inoculations were being administered. The solid bars represent the period when injections were being given to each patient. A break in the bar's continuity indicates that injections were either temporarily interrupted or discontinued. In three cases, it will be observed that the final injections were given early in September 1958, three to four months prior to onset of symptoms. In the other cases, the inoculations



were continued up to the time when symptoms began. Onset dates are spread over a two month period from December 1958 through January 1959.

There being no evidence to support an explanation for this relative cluster of cases as hepatitis A, one is led to consider common exposure to the agent of hepatitis B, in which the prolonged incubation period would be compatible with the observations. It is of particular interest in comparing the periods of regular injection therapy illustrated in Figure 1, that only during late August and early September 1958 did a potential "common exposure" occur, a time when all patients made visits to the physician during the same week. For some, this was the last opportunity for parenteral infection to have occurred. When the clinical onset dates are related to this "common exposure," incubations of approximately 90 to 150 days are suggested, times quite compatible with those observed for hepatitis B. Careful histories from the patients with regard to their injection histories suggest, in addition, that during this particular time in late summer, all of them were receiving at least weekly injections, on either Friday evenings or Saturday mornings.

Epidemiological conclusions supporting the diagnosis of hepatitis B are based on the clinical character of the illness, the age distribution of cases, the lack of evidence for diagnosis of hepatitis A, and the uniform exposure to injections at an appropriate interval of incubation for hepatitis B. Since no common parenteral medication was being given to all eight patients which might

be suspected of contamination, it is most likely that the infectious agent was transmitted by parenteral equipment, needles or syringes, contaminated with infective material and used without adequate sterilization.

PREVENTIVE MEASURES

A. General Recommendations. Current preventive measures for hepatitis depend upon both breaking the chain of transmission through isolation of cases and protecting with immune globulin, those exposed, who are most likely to become infected. Isolation of cases, with stool and blood precautions, is obviously of major importance. It cannot be emphasized too strongly that personal cleanliness, particularly thorough handwashing, and general care to avoid contact with material contaminated with the blood and stool of hepatitis patients is essential.

Although only blood in hepatitis B is known to be infective, all hepatitis cases should be similarly isolated because there is no valid clinical method of distinguishing hepatitis A from hepatitis B. For practical purposes isolation should continue three or four weeks after onset of symptoms, and longer if symptoms persist.

B. Prophylaxis. Considerable observations on the effectiveness of immune globulin in prophylaxis of hepatitis A have led to current acceptance of a dosage schedule of 0.01ml per pound of body weight. While a larger dose may give a slightly smaller percentage of failures, the recommended dose has been noted to prevent hepatitis in 80 to 90 percent of persons receiving it prior to

the onset of symptoms. On the basis of careful epidemiological studies of the spread of hepatitis A, the general recommendation that household contacts be given immune globulin prophylaxis has evolved. Hepatitis in pregnancy has been noted to be particularly severe, and therefore pregnant women who have even casual contact with known hepatitis should be given prophylactic immune globulin in the same dosage. Immune globulin is not effective for the prophylaxis of hepatitis B.

C. *Syringe-Needle Precautions.* It is conceivable that there is a real increase in the incidence of hepatitis due to virus B, when one considers the prolonged carrier state and the increasing frequency of vaccinations, inoculations and parenteral therapy. The potential for parenteral transmission of disease continues to increase and therefore a close review of aseptic techniques is warranted.

The hepatitis viruses are unusually resistant to inactivation by physical and chemical agents. Since the organism cannot be cultured, no thermal death point can be determined and specific recommendations for sterilization of potentially contaminated equipment become difficult. The following recommendations are hereby presented by the City of Bangor, Health and Hospital Advisory Committee, as having a reasonable safety factor of general acceptance.⁵

1. General Precautions.
 - a. The use of disposable syringe-needle unit is obviously of value.
 - b. The multiple dose per-syringe technique is not recommended for any inoculation or venipuncture.
 - c. Lancets used to obtain capillary blood for laboratory determination should be disposable.
2. Cleaning
 - a. Clean equipment immediately by forcing cold water through barrel and needle until clear.
 - b. Separate the barrel, plunger and needle to assure complete exposure of all surfaces and soak in an effective blood solvent detergent.
 - c. Clean thoroughly by forcing solvent detergent through each unit.
 - d. Rinse by forcing clear water through each unit.
 - e. Separate the barrel, plunger and needle for sterilizing.
 - f. Needles sterilized under pressure must have residual moisture in the cannula prior to sterilization.
3. The following methods of sterilization are generally acceptable:
 - a. Active boiling for not less than 30 minutes.
 - b. Autoclaving at 15 to 20 pounds pressure for not less than 20 minutes.
 - c. Dry heat at 180°C for two hours.

DISCUSSION

Epidemiology can begin only with case reporting. It is rare for one physician to see a sufficient number of cases of any disease to make him suspicious of a common source epidemic. A physician's knowledge of each disease must therefore be shared with a central reporting agency which is usually a local health department. Effective epidemiology needs the active participation of all physicians and hospitals in a community.

Reporting of communicable diseases establishes a reciprocity between the local health department and the practicing physician. A health department can provide the physician of a community with:

1. An accurate estimate of the disease incidence in the community.
2. An opportunity to correlate data, from which, after epidemiological study, a common source may be determined.
3. Data which may contribute to a more specific diagnosis, particularly in diseases such as hepatitis that are difficult to diagnose by clinical methods.
4. Suggested methods for prophylaxis and control.

Many physicians fail to report a disease because they question the practical use of such information by health departments. The reciprocity between physicians and health department is strengthened when all communicable diseases are reported, and when members of the local medical society take sufficient interest in tax supported health activities to insure that this reporting of disease will be put to a practical and effective use.

The preceding description of an epidemiological study, starting with the case reports of two jaundiced individuals and suggestive of a common source, plus an accumulation of data which contributes to a more specific diagnosis, is an example of the reciprocity that can be initiated with good case reporting.

SUMMARY

An outbreak of viral hepatitis consistent with a virus B infection is described with an accounting of epidemiological techniques and findings. The importance of continued emphasis on aseptic techniques is stressed. Recommendations for syringe-needle precautions are presented.

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Renal Vein Thrombosis

An Unusual Case Associated With Anomalous Ureters And Thrombophletis

PHILIP J. G. QUIGLEY, M.D.*

Renal vein thrombosis is not rare in infants. It has usually been reported as a complication of some severe dehydrating disease and is only rarely associated with thrombophlebitis of the renal veins.

In 1958 Kaufman¹ published a comprehensive review of renal vein thrombosis in which he tabulated 96 cases since 1900 in patients under two years of age. Sixty per cent of these cases were under, and forty per cent were over, two months old. Although no sex preponderance was noted in the entire series, it is of interest that bilateral involvement was the more frequent form in females. It was also noted the unilateral variety in females more frequently involved the left kidney than the right.

Gastroenteritis, complicated by dehydration, has been the most common condition associated with renal vein thrombosis. Other infections, including "hematogenous" pyelonephritis, have also been reported as pre-disposing factors in the development of this process. In none of the cases reviewed in the literature has a urinary tract anomaly appeared to have been associated with the thrombosis of the renal veins.

The diagnosis of renal vein thrombosis is of particular importance when the disease is unilateral because of the successful treatment of such cases by nephrectomy.^{1,2,3}

The accompanying report concerns a two-month-old female with anomalous development of the ureters complicated by bilateral renal vein thrombosis and thrombophlebitis.

CASE REPORT

This two-month-old white female infant was admitted to the E.M.G.H. on June 20, 1958, at 12:50 a.m. with a chief complaint of poor feeding for the previous four days, and pallor for one day. The history was that for four days prior to admission this previously normal infant took less formula than usual. Two days prior to admission she seemed listless and was constipated, but had no fever. One day prior to admission she took less than five ounces of formula, vomited twice, appeared quite pale, and continued to be constipated. She produced a small yellow stool after a suppository. Twelve hours prior to admission she appeared extremely pale, had taken only five ounces of formula in the previous twenty-four hours, and was very fussy and listless. She

Gastroenteritis, complicated by dehydration, has been the most common condition associated with renal vein thrombosis.

was examined by her physician three hours prior to admission, and he noted enlargement of the liver and spleen and a large right lower quadrant mass. The white blood count at that time was 24,000 with some atypical lymphocytes; the hemoglobin was 8.4 grams per 100 ml. She was seen in consultation by a surgeon and was referred to this hospital. Previous history was that she had had a normal full-term delivery, with no history of premature placental separation or of hemorrhage prior to or at delivery. There was one sibling who was healthy.

Physical findings on admission were as follows: Temperature 102° F., pulse 130, respiration 24. The patient was an extremely pale, irritable, chronically-ill-appearing, white two-month-old infant, with evidence of recent weight loss. No skin lesions were seen. The anterior fontanelle was open and soft. The pupils and fundi were normal. The ear-drums were slightly red bilaterally, but no abscess was seen. The tonsils were red and large for the age. The chest was symmetrical, but there was some dullness in the right lower chest. The breath sounds were normal. The heart showed no murmurs and no evidence of enlargement. The liver was enlarged, the lower border being three finger-breadths below the costal margin and the xiphoid process. There was a firm, non-tender mass in the right side of the abdomen extending to the flank and lumbar region. The remainder of the abdomen showed no mass, and peristalsis was normal. No rectal mass was found, but the ampulla appeared large. The stool was yellow and guaiac negative. The external genitalia appeared normal. The deep tendon reflexes were equal and active.

X-Ray Reports: "The calvarium does not appear remarkable and shows no apparent fracture. The sutures are not widely separated. The orbits are symmetrical. The petrous ridges look normal. There is no intracranial calcification visible.

The chest discloses a normal-appearing bony thorax, no pneumonia, and a normal-appearing heart.

Survey films vaguely suggest a right upper quadrant mass and right mid-abdominal mass, but gas- and fecal-filled bowel so obscures the shadows generally that it is

*Department of Pathology, Eastern Maine General Hospital, Bangor, Maine

difficult to outline the mass said to be clinically palpable. No kidney shadows can be demonstrated.

Excretory urography indicates an increase in density of the urinary bladder as time goes on, but is not helpful in outlining the renal pelvis, calyces, or either ureter. Again there is enough distention of small and large bowel with gas to suggest some degree of mechanical obstruction, or partial obstruction.

Retrograde pyelography: The catheter has been inserted by means of a cystoscope to enter the distal extremity of the right ureter which is observed to be con-

proximately 250 cc. Following this the infant appeared improved. Respirations gradually returned, but the infant suddenly became cyanotic with respiratory distress. Other treatment included penicillin, Chloromycetin,[®] infusions of Ionosol T[®] and 5% glucose in water, Hykinone,[®] calcium lactate, and calcium gluconate. Temperature was 98.4°F, on the evening of June 20, 1958, 97.4° on the morning of June 21, and 99° on the afternoon of June 21. No further intravenous infusions or blood were planned. At 1:00 p.m. on June 21 she was described as not so well and still having some

LABORATORY FINDINGS

Date	Hct.	WBC	Seg.	Band	Metamyel.	Myelo.	Metarubr.	Tox. Gran.	Lymph.	Mono	NPN
6-20-58	27	24,100	63	12	2	—	2/100 wbc	4+	18	3	—
"	44	34,150	63	14	3	1	—	3+	12	7	50
" (10-PM)	44	—	—	—	—	—	—	—	—	—	—
6-21-58	50	42,500	47	30	9	1	—	4+	12	1	—

siderably dilated and markedly tortuous. Injection of contrast medium reveals the medium running upward along the dilated and tortuous ureter to the level of the upper border of L-5. Nothing appears to get out into the right kidney. On the left, cystoscopically, an orifice can not be seen."

Urinalysis (6-20-58): Sp. Gr. 1.024; pH 7.0; Albumin 0.5 gm%; Sugar & Acetone negative; WBC and RBC very numerous; many bacteria.

Lee-White Coagulation Time: 1st: 3 min. 10 sec.; 2nd: 3 min. 15 sec.

Urine Culture (from right kidney): *B. coli*, resistant to Bacitracin and penicillin.

Feces: Guaiac negative.

Hospital Course: At 10:00 a.m. the mass was unchanged and the abdomen was more distended, but there was no localized bowel distention. The surgical consultant described the mass as filling the right flank and the better part of the right side of the abdomen, and having a rounded lower margin. It was also felt below the costal margin on the right and poorly differentiated from the liver. At 4:15 p.m. on June 20 a transfusion of 150 cc. of whole blood was started. Following urologic consultation, an exploratory operation was performed in the right retro-peritoneal area under ether and oxygen anesthesia. A further 250 cc. of blood was started during the operation. The right kidney was found to be enlarged to about three times the normal size, surrounded by a large area of hemorrhage. The ureter was dilated, tortuous, and patulous, and was obstructed by thick mucoid pus. A ureterostomy was done, a T-tube being inserted. Following the operation the infant was in shock and was placed in shock position. Cut-downs were done on both saphenous veins, and blood was given under pressure to a total of ap-

proximately 250 cc. On June 21, 8 cc. of urine was recorded at 6:00 a.m. and an unspecified, presumably small, amount of "bright yellow" urine at 4:10 p.m. At 5:20 p.m. she appeared suddenly in extremis and when seen by the physician had expired. Suctioning prior to death showed bloody fluid in the naso-pharynx. She was pronounced dead at 5:45 p.m. on June 21, 1958, about 40 hours after admission and 23 hours after operation.

Autopsy revealed the following significant findings: The left kidney weighed 28 grams and showed fetal lobulation; the capsule stripped easily, revealing a smooth external surface. The left renal cortex averaged 0.2 cm. in thickness and cortex and medulla were distinct, the cortex being pinkish-tan and the medulla moderately dark red. The mucosa of the left renal pelvis was pale and smooth, and the pelvis contained a small amount of yellowish-green soft material some of which was also seen in the upper portion of the left ureter. The left ureter, except at the lower end, had an average diameter of 0.6 cm. and the wall measured less than 0.1 cm. in thickness. The ureteral mucosa was pale and smooth. The lowest 0.3 cm. of the left ureter appeared completely obstructed, and no left ureteric opening in the bladder could be found grossly.

The right kidney weighed 70 grams and was dark red externally. The normal average kidney weight for this age is 19 grams. The capsule stripped easily revealing a smooth external surface. The cortex measured 0.3 cm. in thickness, cortex and medulla being indistinct, and the entire parenchyma being dark red. The renal pelvis contained soft yellowish material, and the mucosa was grayish-pink and slightly granular. The right ureter was dilated, averaging 0.4 cm. in diameter, except in the lowest 0.4 cm. where it averaged 0.2 cm. in external diameter; an 0.1 cm. diameter probe

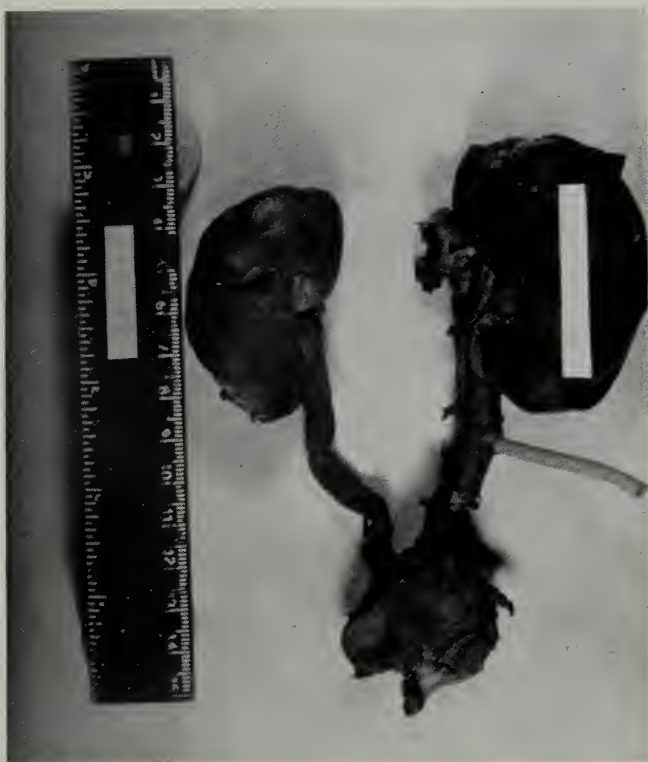


FIG. 1. Posterior aspect of kidneys, ureters, and urinary bladder, showing the T-tube in place in the right ureter, and the enlargement of the right kidney.

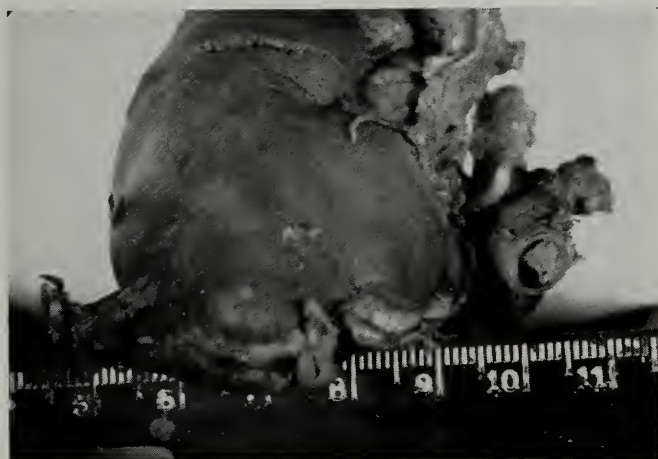


FIG. 2. The right kidney: the attached segment of inferior vena cava shows the thrombus.

was fairly easily passed through this narrow portion. There was a T-tube ureterostomy 4.0 cm. below the pelvi-ureteric junction and 5.0 cm. above the bladder. The right renal vein, and the inferior vena cava from the junction of the right renal vein to the entrance of the hepatic veins and below the renal vein down to just above the junction of the common iliac veins, were filled by moderately soft grayish-red slightly adherent thrombus which also extended into the medial 0.4 cm. of the left renal vein (Figures 1 & 2). The renal arteries averaged 0.2 cm. in diameter and were not grossly remarkable. No evidence of thrombus was found in

the pelvic or leg veins. The tissue surrounding the occluded portion of the vena cava and the right renal vessels was slightly thickened. Blood culture at autopsy showed no growth after one week.

Microscopic findings: The lungs showed focal atelectasis, most extensive in the left lower lobe. One small artery in the left upper lobe was occluded by thrombus, with a corresponding area of recent infarction. The liver showed some chronic passive congestion and moderate fatty metamorphosis. Two veins in the medulla of the right adrenal contained non-occlusive thrombi.

Sections of the *right* kidney showed extensive loss of differential staining of the medulla and cortex except for a subcapsular zone in some areas, with congestion of vessels and some extravasation of RBC's. The better-preserved parenchyma showed marked congestion of vessels and interstitial infiltration by polymorphs which also filled many tubules. The pelvic mucosa showed areas of ulceration, the surface being covered by patches of fibrin with numerous polymorphs and some epithelial cells. The larger intra-renal veins were filled with thrombus composed of fibrin with RBC's and numerous polymorphs, with focal beginning organization and polymorphonuclear infiltration of the walls of the veins. There were thrombi in a few more peripheral veins, and in veins in the medulla.

Section of the *left* kidney showed glomeruli and capillaries, especially capillaries in the medulla, engorged by RBC's. There were areas of interstitial polymorphonuclear infiltration. Tubules in the medulla were filled by epithelial cells and fibrin, with polymorphs in some of the tubules. Many tubules in the cortex were filled by amorphous acidophilic material; some contained polymorphs. There was moderate sub-epithelial lymphocytic infiltration in the pelvic mucosa. No intra-renal vein thrombosis was seen.

The urinary bladder showed some engorged capillaries and some extravasation of RBC's, with focal lymphocytic infiltration, in the mucosa. Sections of the tissue through the area of the grossly atretic lower end of the left ureter revealed a minute lumen lined by transitional epithelium. The upper portion of the left ureter showed some lymphocytic infiltration of the mucosa. The right ureter showed edema and lymphocyte and polymorphonuclear infiltration of the mucosa and muscularis.

Sections of the inferior vena cava showed a thrombus which was attached to the intima and which showed early organization in a few areas; there was considerable polymorphonuclear infiltration of the intima, media, and adventitia. The right ventricle of the heart showed a thrombus in the interstices of the trabeculae carneae, which, however, could not be seen to be definitely attached to the endocardium. The vertebral bone-marrow showed hyperplasia with predominance of the granulocytic series. There was a small thymic focus in the thyroid gland.

Pathological Diagnosis: Cause of Death: Thrombophlebitis involving inferior vena cava, and both renal veins, with infarction of both kidneys; uremia.

Additional Findings: Bilateral pyelonephritis. Congenital stenosis, lower end of each ureter, with hydro-ureter.

Small infarct, upper lobe of left lung.

Thrombus, right ventricle.

Focal atelectasis, bilateral.

Fatty metamorphosis, liver, moderate; congestion of liver, moderate.

Congestion of adrenals, marked; extension of thrombus into right adrenal vein.

COMMENT

The sequence of events in this case is believed to have been as follows:

- (1) Congenital stenosis of the lower end of each ureter.

- (2) Upper urinary tract infection, progressing to pyelonephritis.
- (3) Thrombophlebitis, beginning in the right kidney and extending to involve the inferior vena cava and left renal vein.
- (4) Infarction of the right kidney, and, subsequently, of the left kidney.

SUMMARY

An unusual case of renal infarction is presented. The infarction was due to renal vein and inferior vena cava thrombophlebitis secondary to an anomaly of the ureters and pyelonephritis. This appears to be the first case recorded in which renal vein thrombosis has complicated a urinary tract anomaly in an infant.

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SURGEON SUED FOR SLANDERING LEGAL PROFESSION

On November 4, 1959, J. N. Lindquist, an Omaha, Nebraska attorney, filed suit against C. N. Lambert, M.D., professor of orthopedic surgery at the University of Illinois College of Medicine, for \$500,000 for statements made in a speech in Omaha about the legal profession. Doctor Lambert returned to Chicago before the suit was filed and no service has been made on him.

Mr. Lindquist charged that Dr. Lambert made statements which were untrue and constitute a slander and libel on the legal profession when he spoke in Omaha on November 2 at a meeting of the Midwest Clinical Society. Dr. Lambert is alleged to have said that a patient is ready to return to normal activity within three months in 80% of so-called whiplash injuries, but a lawyer will advise his client to keep going back to his doctor until his damage claim "is ready for action."

The Midwest Clinical Society, the Omaha-Douglas County Medical Society and the Chairman of the Omaha Bar Association's Committee on Medical-Legal Relations have expressed regret that the suit was filed in view of the good rapport that exists in Omaha between the legal and medical profession. — *The Citation*, November 20, 1959, Vol. 2, No. 6.

Clinicopathological Exercise

Case Presented At Eastern Maine General Hospital, Bangor, Maine

Discussed by EDWARD B. BABCOCK, M.D.* and NELSON P. BLACKBURN, M.D.**

PRESENTATION OF CASE

A 75 year old white male was admitted to the hospital with fever and a cough. Four days before admission he noted the onset of hoarseness and cough which became more severe and was associated with shortness of breath. On the day before admission he developed a severe paroxysmal, slightly productive cough. He noted that when upright the cough was accentuated and the family noticed some swelling of the ankles. He denied having paroxysmal nocturnal dyspnea, hemoptysis, or chest pain. One week before admission he had a bout of diarrhea which alternated with constipation. On the day before admission he had had a bowel movement with the use of an enema.

Fourteen years before admission the patient had had a cerebral vascular accident with a left hemi-paresis. Following this he had residual partial paralysis of the left hand and some emotional instability. Ten years prior to entry he was admitted to the hospital for investigation of chronic constipation and urinary frequency. An enlarged prostate treated by supra-pubic prostatectomy showed carcinoma. From that time until four months prior to the present admission he had taken stilbesterol. No cause for the constipation was discovered. A physical examination at that time noted some dyspnea, cyanosis and occasional inspiratory and expiratory wheezes. Seven years before the current admission he was hospitalized for twenty days with a diagnosis of "chronic virus pneumonia." X-ray examination of the chest at that time showed long-standing bilateral pulmonary emphysema accompanied by partial atelectasis of the right lower and left lower lobes with pneumonitis in both lower lobes and thickened pleura or fluid at both bases. Six years before entry he was hospitalized for investigation of chronic constipation and diarrhea. A barium enema at that time was negative.

The patient stated that at the age of 42 he first had pneumonia and had had it four subsequent times. The last episode was approximately six months before admission when he noted orthopnea, paroxysmal nocturnal dyspnea and mild edema. He was treated at home with antibiotics, digitalis and diuretics. He stated that he had had a severe chronic, slightly productive cough for 45 years without significant change. He further stated that he had had severe chronic constipation for many

years and had taken laxatives regularly. These included mineral oil, Haley's M-O,[®] Metamucil[®] and Kondremul.[®] The patient had been a city employee for many years. As far as could be determined, he had never been exposed to irritating dusts or gases.

Physical examination on entry showed a well-developed, well-nourished elderly white male who appeared acutely ill. Blood pressure was 160/70, the pulse 130, respirations 40 and shallow, and temperature 101° F. There was a clawlike deformity of the left hand. The eyes showed arcus senilis and lenticular opacity. The fundi were not well visualized. The pharynx was slightly red and contained a large quantity of nasal discharge. The chest on inspiration moved as a unit and there was no lag. There was dullness at both bases, and auscultation revealed many inspiratory and expiratory rales throughout both lung fields. Fine rales with bronchial breath sounds were noted at both bases. The heart was not enlarged to percussion and the sounds were poorly heard. The rhythm was regular and no murmurs were noted. The femoral and pedal pulses were intact. The liver extended three finger-breadths below the right costal margin and was non-tender. The testicles were atrophic. The left biceps, left knee and left ankle jerks were greater than the right. The extremities showed slight peripheral edema.

X-ray examination of the chest showed the heart and great vessels to be within normal limits of size and shape. There were diffuse areas of increased density involving both lower lung fields with obliteration of the diaphragmatic borders as seen on the PA projection. Laterally there was considerable posterior density obliterating the costophrenic angles. There was no evidence of fluid in the chest cavity. The total white blood cell count was 19,450 with 60 neutrophils, 1 eosinophil, 4 bands, 33 lymphocytes and 2 monocytes; the hemoglobin 14.4 grams; the NPN 30 mg.; the CO₂ 25.5 meq.; the acid phosphatase 1.9 units; the total proteins 6.8 (globulin 3.1); and the serology was negative. Pneumococci, Streptococcus viridans and Staphylococcus albus were cultured from the sputum. Blood cultures on the 1st and 29th hospital days showed no growth. Examination and culture of the urine was negative. The initial ECG showed right bundle branch block and sinus tachycardia. A subsequent tracing showed first degree A-V block and some increase in rate.

The patient was treated with bed rest, oxygen, antibiotics, digitalis and Mercuhydrin.[®] The temperature

*Internist, Eastern Maine General Hospital, Bangor.

**Pathologist, Eastern Maine General Hospital, Bangor.

decreased from 102° to 99° and the hospital course was characterized by dramatic bouts of marked cyanosis, dyspnea and difficulty in raising bronchial secretions. The CO₂ ranged between 30 and 34, the chlorides between 80 and 90, and the potassium between 5.0 and 6.2 meq. The pulse varied between 100 and 110, and the respirations between 30 and 40. On the 29th hospital day the patient became confused and complained of sudden pain in the left chest which was transitory. The temperature rose to 102.4° and the pulse to 140. A total white blood cell count was 25,000 with 61 neutrophils, 17 bands, 5 metamyelocytes and 17 lymphocytes. The CO₂ was 32 and the BUN 19.5. During the next 24 hours the patient had increasing difficulty in raising bronchial secretions, slowly lapsed into unconsciousness, and respirations became markedly labored. He expired on the morning of the 30th hospital day.

DIFFERENTIAL DIAGNOSIS

Dr. Edward Babcock: The area of major involvement in this elderly white male was the pulmonary system. There is evidence that the lungs were involved over many years' time. It might simplify to briefly review

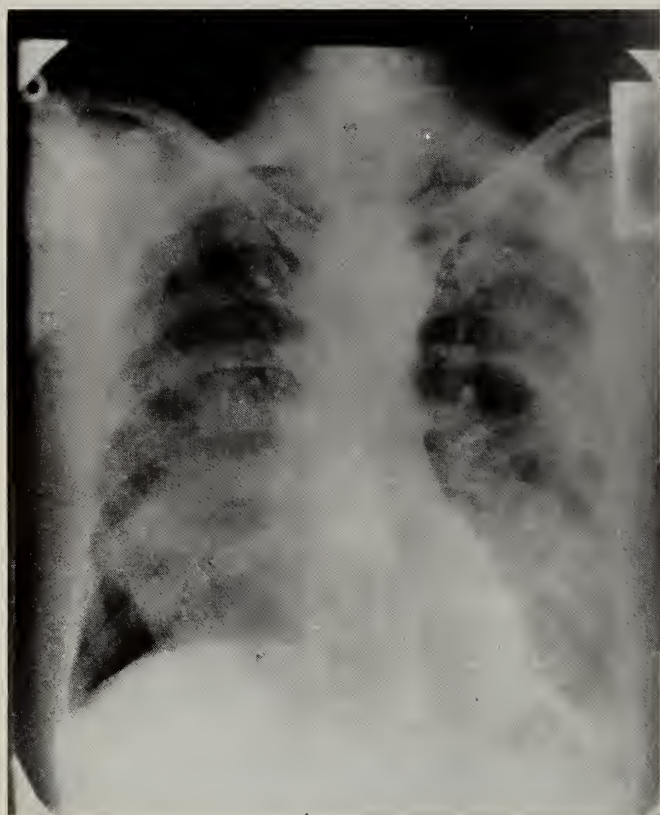


FIG. 1. Chest x-ray taken 7 years prior to terminal admission.

at first the long history up to the admission seven years ago, the last before the late stages of the illness. There were five bouts of pneumonia over a period of over thirty years, the first being at the age of 42. He stated that he had had a severe chronic slightly productive cough for 45 years. During the admission for "chronic

virus pneumonia" seven years prior to the present admission, an x-ray examination of the chest was reported as showing long-standing bilateral pulmonary emphysema accompanied by bilateral lower lobe partial atelectasis and pneumonitis with pleural thickening. This long history indicates chronic pulmonary infection with recurrent exacerbations, though one might be suspicious of some underlying process. A definite diagnosis of bronchiectasis cannot be made without more specific evidence such as an abnormal bronchogram, especially in the absence of hemoptysis or suggestive changes in the PA films. In retrospect, since the patient was alive



FIG. 2. Chest x-ray taken during terminal admission.

seven years later, it is unlikely that malignancy was present at that time. From the history obtained it is also unlikely that changes from exposure to industrial dust or gases was involved. Tuberculosis was not mentioned and apparently was never demonstrated. It seems that up to this point seven years previously, that only a diagnosis of chronic pulmonary disease exaggerated by recurrent infections can be made with any assurance.

No further history of the course of pulmonary disease is mentioned until six months prior to the last admission when again the patient apparently had a flare-up of an acute pneumonic process. At that time, for the first time, the patient was apparently felt to be in cardiac decompensation since Digitalis was started and diuretics given. The final admission was prompted by the increasing cough associated with shortness of breath. The sputum was slight in amount. Hemoptysis was denied. Physical findings were most prominent at both

bases and included dullness, bronchial breath sounds, and many inspiratory and expiratory rales. The cardiac findings were not abnormal though there was slight peripheral edema. Dr. Smith, would you be willing to comment on the x-rays.

Dr. Hugh Smith: The patient in 1951 had an infiltrating lesion involving the posterior and basilar portion of the left lower lobe which is super-imposed upon lungs that are moderately emphysematous bilaterally and accompanied by an unenlarged heart and hila of normal prominence. As the years go by from 1951 to 1958 this fibrosing infiltrating process extends more anteriorly into the left lower lobe and is accompanied by similar infiltration in the right lower lobe which starts posteriorly and progresses more anteriorly. The progressive lesion at both bases is accompanied by increasing atelectasis of both lower lobes by markedly thickened pleura in the costophrenic sulci posteriorly and laterally, and prominence of both hila. Last films of the chest secured in 1958 disclose no inflammatory reaction in either of the upper lobes or right middle lobe which are fairly well aerated. Both lower lobes are largely atelectatic and their outlines obscured by dense fibrous scarring and thickening pleura. The heart is not grossly enlarged.

Dr. Babcock: Apparently an acute pneumonic process was the basis for this last admission. A white blood count was 19,450 suggesting that a bacterial infection was present. The patient was again treated with digitals and mercuhydrin.

In addition to the previously mentioned findings of seven years prior to his last admission, one would like to disclose a superimposed process that might have brought on this patient's late downhill course and demise. It is entirely possible that this represented the terminal episode of a long history of chronic pulmonary disease and recurrent infections with or without bronchiectasis. There are suggestions of other possibilities. Carcinoma in this age group has to be considered. There was a prominence of both hilar regions and Dr. Smith says this has developed since 1951. However, the lesions are bilateral and extensive which is somewhat against primary bronchiogenic carcinoma. There was no history of hemoptysis. No bronchoscopy was done possibly because of his age and debilitated state. There is a type of metastasis of this neoplasm that represents backward spread from the mediastinal nodes through the lymphatics to produce a diffuse lymphangitic involvement. A lymphangitic spread of carcinoma could explain the late course of this illness including the mentioned bouts of cyanosis and the clinically diagnosed right heart failure. Bronchiogenic carcinoma must be mentioned but in the absence of more specific leads, perhaps best as a possibility only. There are other sources of carcinoma that are known to result in metastasis with diffuse lymphangitic spread into the lungs. The stomach and pancreas are two of the more

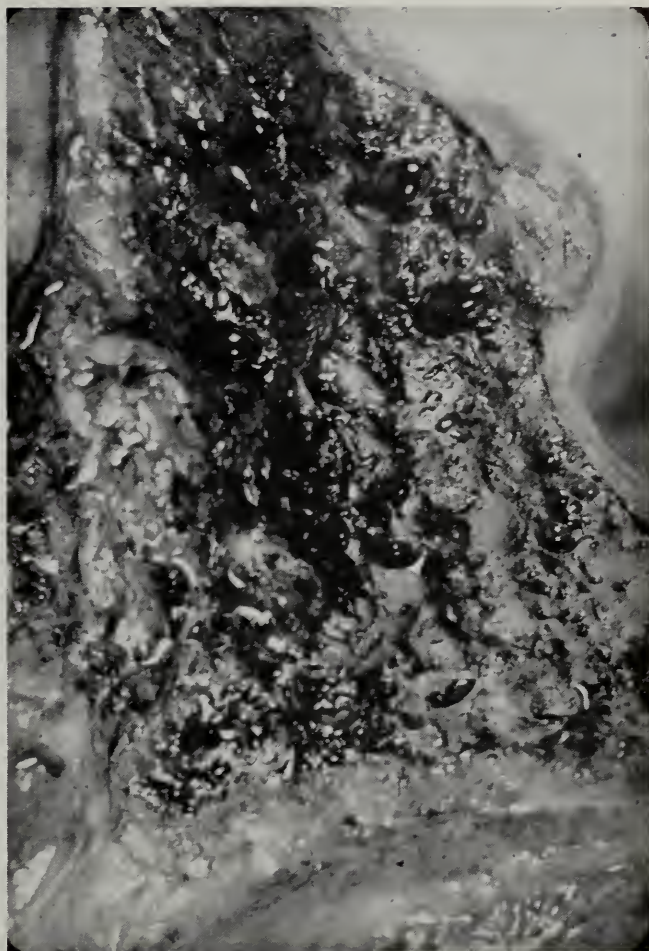


FIG. 3. Gross appearance of the cut surface of the left lower lobe showing drops of mineral oil.

common areas. There is little to direct attention to these areas but each is known for its deceptively quiet onset. In a male, carcinoma of the breast can be excluded. Carcinoma of the colon has been reported. Since a barium enema was performed for constipation six years before the last admission, this may have been suspected. Negative findings do not exclude it, nor does the fact that it was suspected six years ago preclude its developing later. There is nothing specific to suggest it, however. Carcinoma of the prostate rarely produces this type of metastasis. Discovery of carcinoma ten years prior to the entry without other signs of recurrence after surgical removal of the gland makes it even less likely. The possibility remains that lymphangitic spread of carcinoma to the lungs would explain the entire late picture very well even though no primary source of origin is easily demonstrable.

There is no history of radiation sufficient to produce fibrosis of this degree.

There is another process that can perhaps explain this entire picture best of all. It is known that because of severe chronic constipation the patient had taken various laxatives including mineral oil for many years. The fact that the patient had an old cerebral vascular accident with a left hemiparesis would make efficient

pharyngeal control of swallowing substances more difficult and aspiration easier. Lipoid pneumonia secondary to mineral oil aspiration is characteristically bilateral and multi-segmental. If one considers that the patient slept on his back the posterior basilar segments would tend to be the dependent portions at least part of the time. Absence of hemoptysis is a common finding. The chronicity of the history is usual. I would like to make as my most likely diagnosis that of lipoid pneumonia secondary to long-term aspiration of mineral oil superimposed on a background of severe chronic pulmonary disease with recurrent infection.

It is not entirely clear what the immediate cause of death was. On all the chest x-rays it was reported that there was no cardiac enlargement which seems to me to be against a diagnosis of recurrent congestive heart failure. Electrocardiographic pattern of right bundle branch block is consistent with involvement of the right heart, but I would expect more evidence of right ventricular enlargement before actual failure occurred. The liver is mentioned to be three fingerbreadths below the costal margin, but its being non-tender suggests that there existed a chronic hepatic process such as the fatty infiltration stage of portal cirrhosis rather than congestion from cardiac failure. The absence of characteristic changes in the chest x-rays is against recurrent pulmonary emboli. It has been mentioned that there was long standing bilateral pulmonary emphysema and fibrosis on x-ray. With a super-imposed process such as lipoid pneumonia, recurrent infections, and excessive bronchial secretions, it is not unlikely that a situation of inadequate gaseous exchange of the lungs existed, this on the basis of altered perfusion — ventilation relationships. It is noted that the CO₂ rose from 25.8 meq. to between 30 and 34 meq. during the last hospital stay. CO₂ narcosis could have developed which would make the management more difficult, particularly in relation to administering oxygen. A sudden pain in the left chest late in the hospital course is again difficult to interpret. There is no cardiogram mentioned to evaluate myocardial injury. If a chest x-ray was taken this would exclude spontaneous pneumothorax. In view of the long pulmonary history it would seem an injustice to suggest that this patient died of other than progressive pulmonary insufficiency.

CLINICAL DIAGNOSES

Chronic pulmonary disease with recent superimposed pneumonitis.
Congestive heart failure, left and right.
Old left cerebral vascular accident.
Carcinoma of prostate, history of.

DR. EDWARD BABCOCK'S DIAGNOSES

Chronic pulmonary disease with emphysema and fibrosis.
Lipoid pneumonia.
Progressive pulmonary insufficiency.

ANATOMICAL DIAGNOSES

Lipoid pneumonia, bilateral, extensive with fibrous pleuritis and focal calcification.
Acute bronchopneumonia.
Inspissation of bronchial secretions.
Right ventricular hypertrophy.
Fatty infiltration of liver.
Healed myocardial infarction.
Fibrous pericarditis with focal calcification.
Benign peptic ulcer of duodenum.
Hypertrophy of breasts.
Atrophy of testicles.

PATHOLOGICAL DISCUSSION

Dr. Nelson P. Blackburn: At autopsy, the firm irregularly lobulated lungs were about three times normal weight and were densely adherent to the parietal pleura by fibrous and partially calcified adhesions. About 50% of the cut surfaces were gray-black, very firm, and contained scattered cystic areas which varied in size from being just visible to about 0.7 cm. in diameter. These spaces contained clear colorless oily material which dripped from the cut surfaces and could be expressed by squeezing the lung tissue. The relatively uninvolved areas of the upper portions of upper and lower lobes were gray-pink, somewhat granular, and showed increased anthracotic pigmentation. The entire tracheobronchial tree was filled with thick tenacious yellow mucus. The lipoid material was assumed to be mineral oil and definitive chemical analyses were not done.

Microscopically, the affected areas showed moderately severe fibrosis, large numbers of macrophages containing large and small vacuoles, numerous multinucleate giant cells, and a large amount of black particulate material which was present in macrophages and in smaller fat droplets. In the parenchyma of the upper portions of the lobes, which were relatively uninvolved by the above-noted process, there was extensive infiltration of alveolar spaces by neutrophils and fibrin.

Other findings included hypertrophy of the right ventricle of the heart due to the long standing pulmonary decompensation; hypertrophy of breasts and atrophy of testicles which most likely was the result of long standing stilbesterol medication; marked hepatomegaly due to fatty infiltration of liver which, although there was no corroborative history, is almost always due to nutritional deficiency; an old healed myocardial infarction; and a peptic ulcer of the duodenum.

Reaction in lung tissue to oils and fat depends on the degree of unsaturation of the material. Lard and peanut oil, which are highly unsaturated, are most irritating and result in an acute intense inflammatory reaction. Mineral oil is relatively saturated and incites little reaction other than that of an inert foreign body. Small amounts which collect on the pharyngeal mucosa as the result of mineral oil intake or oily nose drops, being non-irritating, migrate into the lung tissue. Lipoid

Continued on page 446

125 Years of Bangor Medicine

MASON TROWBRIDGE, JR., M.D., CARL E. BLAISDELL, M.D. and GEORGE R. WALKER, M.D.

The Penobscot County Medical Society participated recently in the 125th Anniversary celebration of the incorporation of the City of Bangor. From September 21st until October 3rd there was on exhibition in the Bangor Public Library a collection of old books, instruments, and other relics of Bangor's medical past. The exhibit was open during all regular library hours, and a number of church, school and other groups were taken through on special tours by members of the Penobscot County Medical Society. The newspaper, local radio and television stations went all out in their efforts to publicize the event. The week before the opening of the exhibit four members of the County Medical Society appeared on a half hour television show on WABI-TV to show the public a few samples of what was in store for them.

The most attractive and colorful part of the exhibit was that furnished by the Bangor Garden Club. Part of the display is shown in figure 1. Not only were there dozens of flowers and herbs, but cards indicating the medicinal uses of these plants were on display. Mr. Felix Ranlett of the Bangor Public Library supplied several books on herbs and other plants of medicinal value. It should be noted that Mr. Ranlett's efforts to make the medical exhibit a success were far beyond the call of duty. (See pages 444 and 445)

An apothecary chest (figure #2), used in the Civil War by Dr. Augustus Choate Hamlin (1829-1905), was the center of much attention. This chest was originally the property of Dr. Harry Butler, Sr. and was loaned for the exhibit by Dr. Harry Butler, Jr. When this interesting piece of medical equipment was shown on TV, the comment was made that one had to smell it to appreciate it. It seems likely that this apothecary set was in use at Andersonville Prison since Dr. Hamlin was not only there but wrote a book about it. The attics of Bangor and other cities of eastern Maine yielded many treasures. Figure #3 shows several books some of which were thought, by their owners, to be of no value. At the lower left can be seen an 1823 translation of Laennec. The cylinders shown in his book are his original monaural stethoscope. Had this photograph been taken a few hours later, a monaural stethoscope itself would have been shown along side the picture. This came from the collection of the late Dr. Oscar F. Larson of Machias. The black spot shown on the page of the adjacent book is the epigastrium of Alexis St. Martin after Beaumont had been unsuccessful in trying to close the opening. This is an original 1834 edition of Beaumont's classic work on gastric secretions. Some visitors to the exhibit averred that Dr. Beaumont

didn't try too hard to close the hole. This can readily be disproven by reading the book, since Beaumont bled his patient repeatedly. Three of the other books are first edition of Sir William Osler's textbook and those of John Hunter and Austin Flint. Figure #4 shows a "paperdoll" book published in 1847 on midwifery. There are numerous illustrations showing the application of forceps similar to the illustration shown in figure #4. On lifting up successive flaps the manner in which the head rotated in the pelvis can be demonstrated. A remarkable collection of old books belonging to Dr. John Mason who practiced in Bangor from 1826 to 1871 was lent by Dr. Robert O. Kellogg. This collection not only included Laennec and Beaumont, but also volumes by Dupuytren, Meckel, Corvisart and other distinguished men of medicine.

Visitors to the "medicine show" were amazed and occasionally horrified to observe a live leech shown in figure #5. The glass sphere to the left of figure #5 about the size of a golf ball is a device used for "cupping." Several of the older and not so old physicians visiting the exhibit told of having used or seen leeches used. It is unfortunate that a half dozen "eyestones" cannot be seen readily. Dr. Dexter W. Clough of Bangor not only presented these on TV, but also did a very nice piece of research on the subject. Eyestones were originally the operculum of a small mollusk, and were placed under the upper lid at the inner angle of the eye and allowed to slide laterally to remove foreign bodies in the cornea. The services of a physician were not needed except on those occasions when the stone itself became imbedded in the eye or perhaps took off part of the cornea. Dr. Clough has seen them in use as recently as 18 years ago.

It was indeed fortunate that the library was able to furnish a number of locked glass cases since the surgical instruments shown in figure #6 include a variety of lethal weapons. These instruments were loaned by Dr. Robert O. Kellogg and Dr. Hadley Parrot. Their exact age is not known, but since they could not readily have been sterilized either by heat or chemically it is assumed that they were used in the pre-Lister era. A Gigli saw in each set dates them sometime after the middle of the nineteenth century.

Visitors to the exhibit seemed much interested in a dozen or so x-ray films of various parts of the body. There were also on exhibition three x-ray tubes of different vintages with simple explanations as to how they differed. On the right of figure #7 is an old gas x-ray tube of the type which had to be warmed up for several hours before it was used. On the left is a display model

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*Hirsch, H. A., and Finland
New England J. Med. 260
(May 28)

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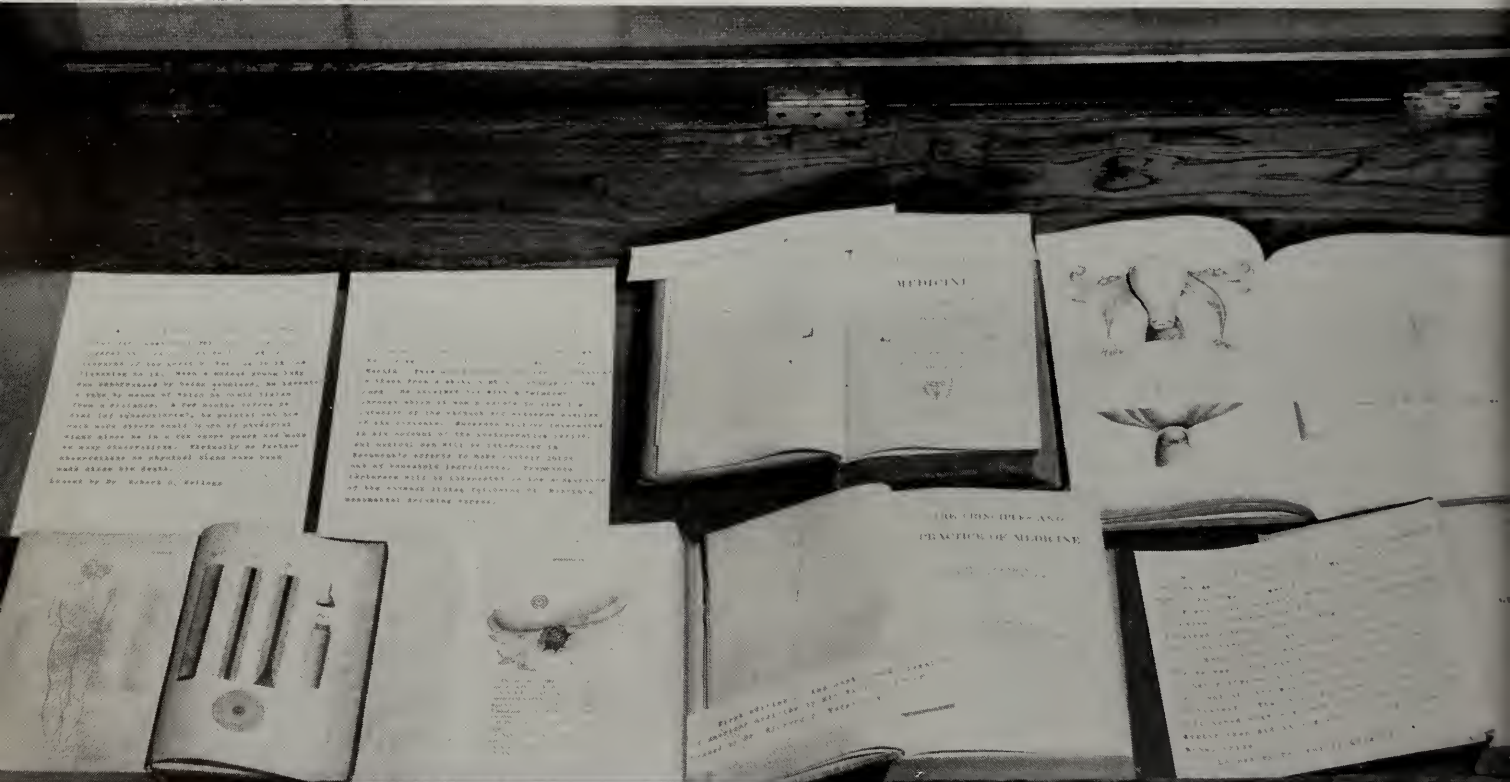
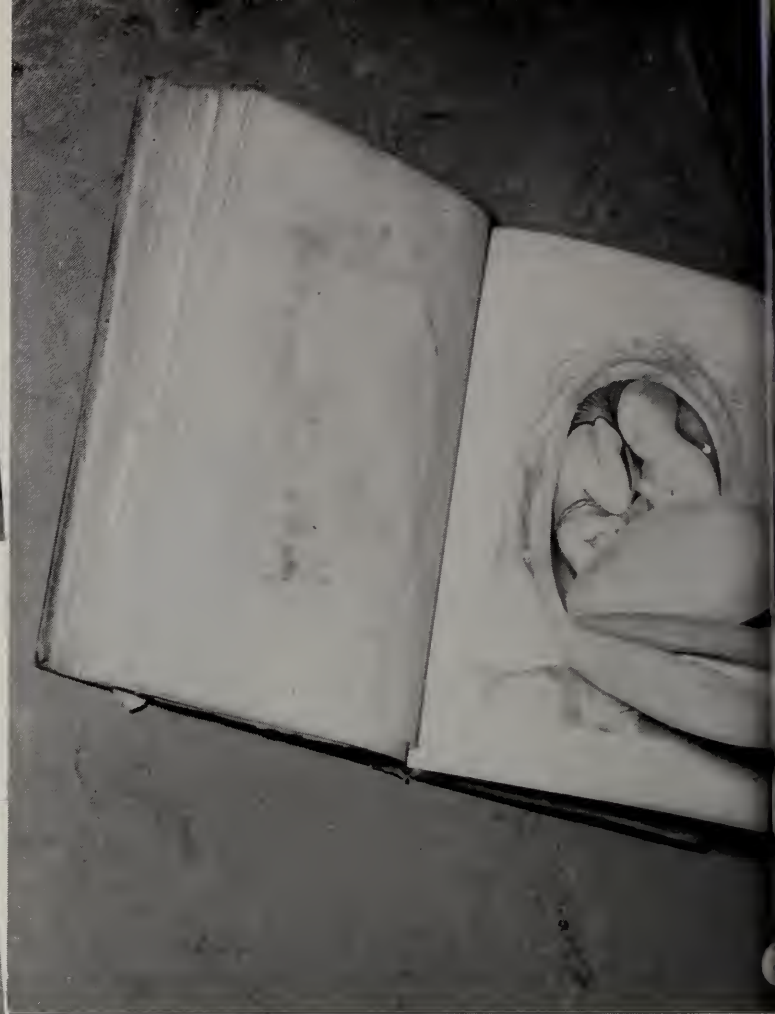
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Collected and Labelled
with Some of Old Time Uses
by
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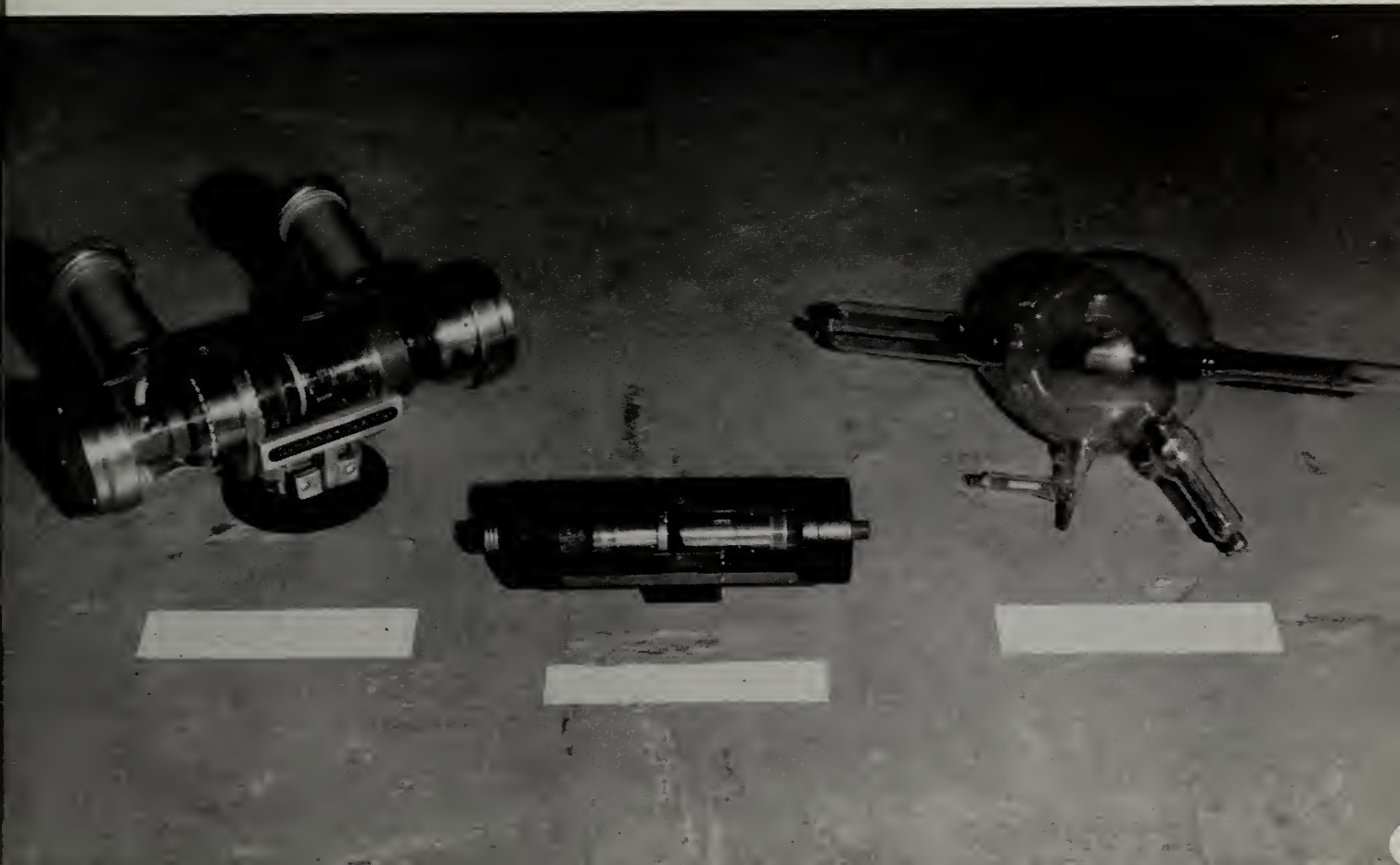
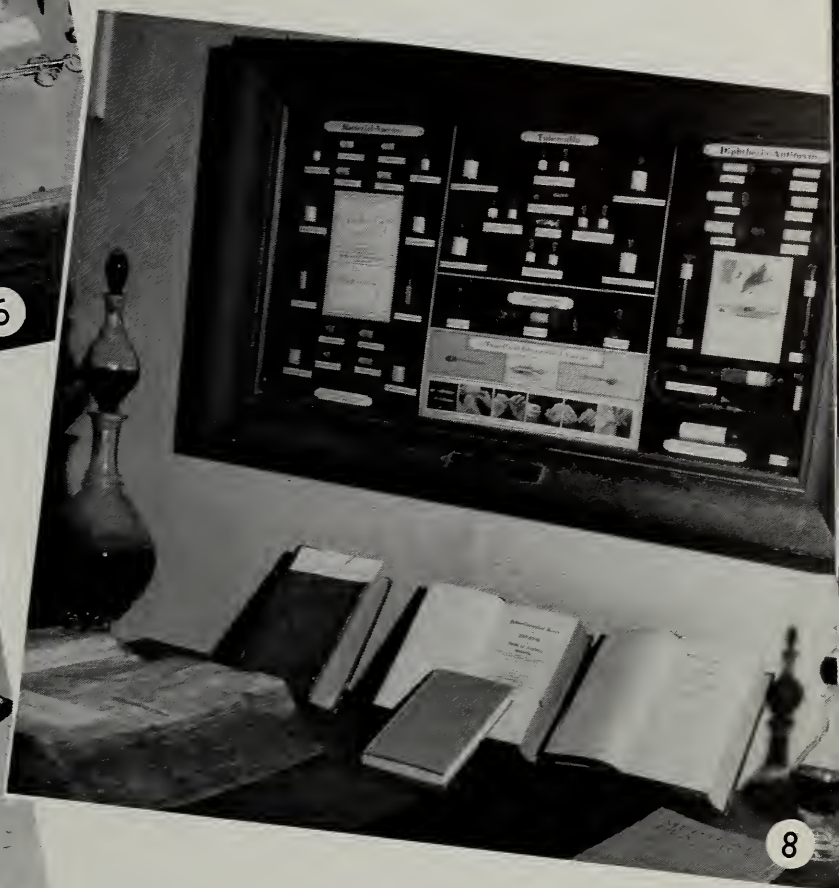
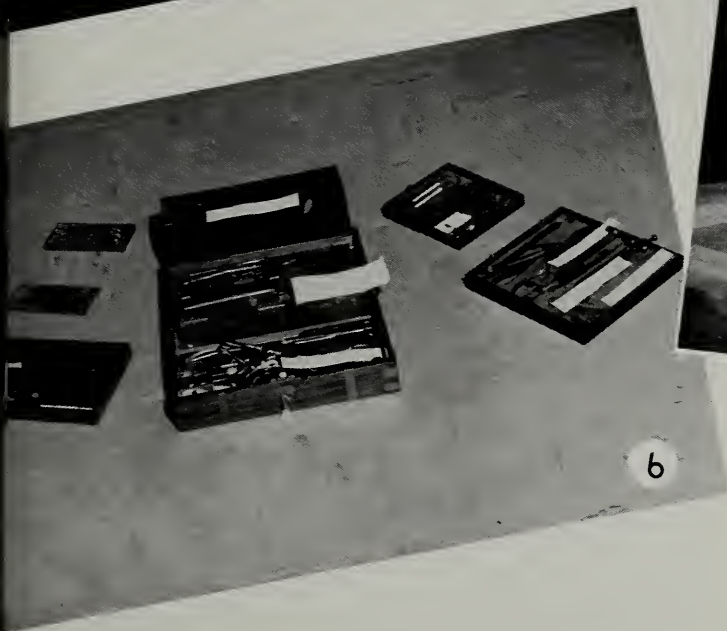
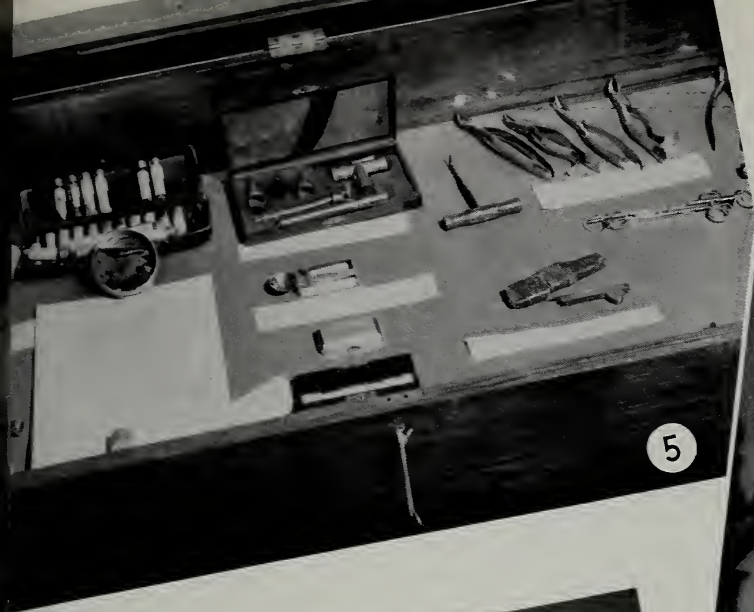


1



2





of a modern rotating anode tube lent by the Picker X-ray Company. The "big one that got away" was a crank operated static electricity x-ray machine in use in communities of eastern Maine before city electricity was introduced. This had unfortunately been thrown out a few months before the exhibit. The authors would be greatly interested in learning of the presence of any of this type of x-ray equipment in Maine. The real find would be the type of equipment that followed the crank operated machine, namely a machine powered by a steam engine. The engine that was used was that employed in the White steam car.

The Department of Bacteriology at the University of Maine was very generous in loaning a display case pictured in figure #8 put out by a defunct pharmaceutical house. This case is probably about 50 years old since it displays proudly the Luetin test, a skin test for syphilis

devised by Noguchi in 1909. On the table is a large book of prescriptions loaned by the Caldwell Sweet Company.

The many items exhibited during the two week period are being returned to their owners. However, a few will remain as the nucleus of a permanent rotating medical exhibit at the Eastern Maine General Hospital. When this is set up it is hoped that physicians visting Bangor will not only see it but may be moved to loan for a week or two some of their medical curios. The many Bangor physicians who helped set up this exhibit found that their venture into medical history was most stimulating and satisfying.

Dr. Trowbridge, 142 Pine Street, Bangor
Dr. Blaisdell, 47 Broadway, Bangor
Dr. Walker, 128 Broadway, Bangor

CLINICOPATHOLOGICAL EXERCISE — *Continued from page 440*

pneumonia due to mineral oil is usually found incidentally at post mortem examination and is of importance only in the amount of lung tissue involved. The degree of involvement of the lungs in this patient is unusual and the result of the cumulative effect of constant aspiration of mineral oil over a period of many years. Oil present in lung tissue is first emulsified, then phagocytized. Occasionally coalescence of the phagocytes results in formation of small pools of mineral oil with occasional macroscopic cysts such as seen in our case.

The cause of this patient's death was pulmonary decompensation resulting from the cumulative effect of bronchopneumonia and bronchial secretions superimposed on lung tissue already severely compromised by extensive lipoid pneumonia. There was no obvious anatomical cause for the transitory terminal episode of acute chest pain.

Dr. Babcock, 115 Wilson Street, Brewer.
Dr. Blackburn, 489 State Street, Bangor.



The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

Medicare Changes Clear Pentagon; Details Pend

The Armed Forces Policy Council, consisting of service secretaries and chiefs of staff, put the final okay on liberalization of Medicare benefits. After long delay, this clears the way to abolition of restrictions imposed in October, 1958, as a money saving measure. Instructions are expected to be dispatched to contractors soon. January 1 is the target date for the inauguration of new rules.

Medicare Program is Nearing The End of its Third Year

Medicare Program is nearing the end of its third year of operation, and Congress may decide in 1960 to take a close look at its record. Both the armed services and appropriations committees of the House and Senate are interested in the progress of this experiment in paying civilian doctors and hospitals for health services given to servicemen's dependents. Any investigation is bound to put the main emphasis upon cost.

In this regard, a study memorandum prepared recently in Medicare offices gave prominence to these factors:

1. Some state and local medical societies exercise little or no influence over fees charged by their members for Medicare services. Others, to the contrary, employ authority bordering on the dictatorial in order to keep these fees "in line."

2. In those states where it is the practice to publish Medicare fee schedules, the tendency is for physicians to charge the maximum allowed, even if it exceeds the

going rate. Nevertheless, Washington continues to adhere to original policy of leaving it entirely up to the state whether or not to publicize fee allowances.

3. In 12 states (unnamed) where fee schedules were published in 1957 but not in 1958, the average medical charge per case was only \$131.10 — in cases where the maximum allowance was \$150. Conclusion by Medicare headquarters was that success or failure to stay within the budget set annually by Congress will depend less on whether states publish fee schedules than on the attitudes of state medical associations and their members.

Promising Vaccine for Trachoma is Reported

An announcement made Friday simultaneously in Washington and Formosa divulges the high hopes of the U. S. Navy in trachoma vaccine developed by three American and two Chinese doctors. Successful clinical trials were described at the annual meeting of the Formosa Medical Association in Taipei. The research team consists of three members of Naval Medical Research Unit No. 2 — Drs. J. Thomas Grayston, R. L. Woolridge and P. B. Johnston — and Drs. Y. F. Yang and S. P. Wang.

Army to Give Adenovirus Vaccine to New Recruits

Plans to begin administering adenovirus vaccine to all new Army recruits were disclosed Friday by the

Army Surgeon General's Office. It is estimated that adenovirus infections are responsible for 50 per cent of the disease rate where recruits are concerned.

Since 1954, about 16 different strains of this organism have been isolated but only two, Nos. 4 & 7, possess major importance. Immunization will be directed against these two. Between 5 and 10 per cent of adenovirus infections in Army rookies develop into mild pneumonias.

VA Hospitals Start Drug Study of Schizophrenia

Veterans Administration hospitals have begun a new study using psychic energizing drugs in conjunction with tranquilizer therapy of schizophrenia. Purpose of this 16-week project is to test the effect of impramine, dextroamphetamine, trifluoperazine and isocarboxizid when administered along with chlorpromazine. Reducing symptoms while building up and maintaining alertness and controlled activity is the project's goal.

Institutions participating in this 500-patient investigation are 27 VA hospitals in Alabama, Arkansas, California, Illinois, Kansas, Kentucky, *Maine*, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Tennessee, Texas, Utah and Washington.

Epidemiology is Theme of New Senate Booklet

Shortage of trained investigators is the major bottleneck in the development of epidemiologic programs on a global scale, according to Senator H. H. Humphrey (D., Minn.). In a forward to "Patterns of Incidence of Certain Diseases Throughout the World," latest in a series of guidebooks by the Senate subcommittee he heads, the Minnesotan emphasizes that modest outlay for personnel training and field work could bring rich dividends.

The 54-page report discusses epidemiological opportunities in cancer, heart disease, arthritis, diabetes, dental illness, neurological disorders and other conditions. Copies are obtainable at no cost upon request to Senate Subcommittee on Reorganization and International Organizations, Room 162 SOB, Washington 25, D. C.

Tranquilizer, Alcohol Combination is Dangerous

If a person is taking the tranquilizer chlorpromazine, he must be very careful about drinking alcoholic beverages, a group of Indiana researchers warned today.

A study at Madison State Hospital, Madison, Ind., indicates that chlorpromazine increases the physiological effect of alcohol, and the two, in combination, affect coordination and judgment even more than alcohol alone.

Chlorpromazine, one of the first tranquilizers to be developed, is most commonly used in mental institutions and by discharged mental patients.

The alcohol-chlorpromazine combination is especially dangerous when a person drives, the researchers said. When a physician prescribes the drug, he must be sure to warn his patients of the possible danger of the use of alcohol, they said in a report in the (November 14) *Journal of the American Medical Association*.

The researchers gave alcohol and chlorpromazine alone and in combination to 24 persons, including 18 hospital employees and six patients. They performed a variety of tests, including a tweezer dexterity test requiring that tweezers be used by the non-preferred hand to insert 16 steel pins in a square, a braking reaction time test, and a mental addition test.

All the subjects showed the worst scores after taking both chlorpromazine and alcohol. They made their best scores when they had received imitation pills and liquids.

The employees were asked to describe how they felt in each test situation. After the alcohol-chlorpromazine session, over 50 per cent reported they were sleepy and 40 per cent said they felt intoxicated or "groggy." These figures were twice as large as similar figures for the test situations in which they received alcohol or chlorpromazine alone.

Peculiar to the alcohol-chlorpromazine condition were such descriptions as "wobbly," "dizzy," "dull mentally," and "poorly coordinated."

At the last experimental session employee-subjects were asked, "If you had been driving an automobile instead of taking tests on the four test days, would there have been any one day when you would have been most unsafe as a driver?" Eighty-seven per cent picked the day on which they had both alcohol and chlorpromazine, while the remainder chose the day when they received alcohol alone.

The researchers were George A. Zirkle, Ph.D.; Peter D. King, M.D.; Ott B. McAtee, M.D., of Madison State Hospital, and Sgt. Robert Van Dyke of the Indiana State Police.

Socialized What?

According to the latest *monthly* report, recipients of old age assistance throughout the nation benefited from medical care for which vendors (doctors, hospitals and druggists, in main) were paid \$21,704,174. Medical care vendor payments for dependent children, the blind, permanently disabled and persons on general relief accounted for an additional \$18 million in the *same month of September*.

Accidental Poisoning Cases Are On The Increase

An official of the New York City Department of Health today termed as "alarming" the increasing number of fatalities from accidental poisonings.

Dr. Harold Jacobziner, assistant commissioner of the department, called for a broad educational campaign to

alert the nation to the dangers of poisoning from drugs and household products.

Writing in the (November 28) *Journal of the American Medical Association*, Dr. Jacobziner said, "Fourteen hundred fifty deaths were reported in the United States last year from poisonings by agents other than poison gases and spoiled food. Over 400 of these deaths were in children under five years of age.

"More children under five . . . died last year in New York City from accidental chemical poisonings than from diphtheria, poliomyelitis, rheumatic fever, scarlet fever, and other streptococcic infections combined."

If You Travel Across Country For Medical Checkups

If you travel across country for medical checkups, expenses may be deductible. The U. S. Tax Court has so ruled in the case of a Los Angeles man — himself an Internal Revenue Service official — who made several trips to New York for periodic examinations by an internist who had been his regular physician prior to his transfer to the West Coast. In effect, the Court decided that to disallow the claim would be an illegal abridgement of freedom of choice.

In the other case in which the Tax Commissioner was overruled, the Court allowed deductibility, under Section 213 of the Code, of sums expended for travel between the taxpayer's home in New Jersey and Florida because the seasonal change to a warmer climate was prescribed by a physician.

But the tribunal refused to go along with an appellant's contention that he should be allowed to deduct sums expended for dancing lessons subsequent to his doctor's instructions that he dance and play table tennis to strengthen abdominal muscles.

Chronic Brucellosis Called Emotional Illness

"Chronic brucellosis" consists essentially of an emotional illness, a group of Johns Hopkins University researchers believe.

Brucellosis, also called Malta or undulant fever, is an infection characterized by tiredness, fever and body aches. Caused by *Brucella* organisms, it is usually acquired from cattle, hogs, sheep or goats.

The Johns Hopkins men, writing in the February Archives of Internal Medicine, said brucellosis is usually a self-limiting disease. Most patients are well and symptom-free within a year after the acute attack, al-

though brucellosis is commonly considered to be a chronic disease that may persist for years.

Of 24 patients who had had brucellosis four to six years before the study, eight were fully recovered; six had had "chronic brucellosis" for a while, but were recovered, and ten still had "chronic brucellosis."

Careful physical and laboratory examination showed that the patients with "chronic brucellosis" could not be distinguished from those who had recovered uneventfully after the acute attack. The two groups were identical with regard to severity, course, and treatment of the acute disease. No evidence of persistent infection with the *Brucella* organism could be found in the chronic patients.

However, the chronic patients continued to show physical symptoms even though there was no physiological reason for them. Their symptoms were nonspecific — fatigue, headache, "nervousness" and depression — much like those appearing in neurotic persons.

Psychological tests and psychiatric interviews revealed that the chronic patients had considerably more emotional disturbance than did the recovered patients. The majority of the chronic patients appeared depressed and anxious.

Most of the chronic patients had had emotional difficulties in childhood and had been experiencing significant stresses of some sort during the period they were acutely ill. The recovered patients had not undergone such stresses, the doctors said.

They concluded that emotional disturbance was "significantly more prevalent" in the chronic patients and that their "disease" was primarily emotional.

The doctors explained that symptomatic recovery from acute brucellosis depends critically on the emotional state of the person at the time of acute infection or in the convalescent period. In the wake of an acute *Brucella* infection there is almost always a period of lassitude or fatigability. In the depressed patient these otherwise transient symptoms merge imperceptibly with depressive fatigue or lassitude and thus appear to be perpetuated.

"The manifestations of the patient's emotional disturbance thus become included by the patient, and often by his physician, in the syndrome of 'chronic brucellosis.'"

The reputation of brucellosis as a chronic disease supports the patient's tendency to retain his symptoms for long periods of time. In addition, "chronic brucellosis" offers a readily available explanation for any discomfort that occurs.



DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

An Analysis Of Services Received By Maine Children Through The Crippled Children's Program — 1958

ELLA LANGER, M.D.,* and VANCE SPRINGER**

Services to children and young adults who are handicapped by some crippling condition or who stand in danger of such handicapping — provide a large segment of the total health services offered Maine citizens through the Department. While the State has no law containing definition of a crippled child, for administrative purposes crippled children include those under 21 years of age who have congenital or acquired defects of the body of such nature that normal function and activity is impaired and thus may be prevented from obtaining remunerative employment because of the defect, or who may be benefited by medical or related type of care to become more useful and self-reliant members of society.

In general, types of conditions for which children are accepted for care under the program are: congenital and birth deformities of orthopedic nature; acquired orthopedic deformities due to acute or chronic disease; other orthopedic deformities; conditions responding to plastic surgery; acquired and congenital heart disease; other congenital deformities; hearing defects.

Crippled children's services are administered as a joint function with maternal and child health services thus making possible a closer integration of both programs to avoid any duplication. More important perhaps, is the fact that by intensifying the preventive phases of maternal and child health service, a definite impact is felt on services to crippled children which leads, eventually, to a decrease in such cases. For example, illnesses such as tuberculosis of the bones, poliomyelitis and other infections which lead to crippling, have decreased as preventive measures have increased. Again, congenital deformities may be prevented as prenatal care receives greater emphasis; birth injuries may also be prevented through improved and extended maternal care. In all, many conditions which appeared incurable several years ago may now be treated and

improved — the length of treatment, especially hospitalization, considerably cut down — because of the use of new drugs.

As to the present status of the crippled children's program, this can perhaps best be illustrated by the fact that in January, 1950 — approximately 15 years after the start of the program — there were 6,500 cases on the State Register. At the end of 1958, a period of a little more than half the time covered by the previous 15-year period, there were double the number of registered cases, or 13,000. This is doubtless due to increased case-finding for such cases, reflected in increased referrals from both physician and public health nurse sources.

Under the program, orthopedic services are carried out in 11 clinic centers throughout the State. In addition, there are two children's cardiac centers which accept rheumatic fever as well as congenital heart cases for diagnosis and follow-up care.

Speech services are provided routinely in four clinic centers of the State and, in addition, a travelling speech clinic is operative on a State-wide basis. Through these centers, speech consultation is provided all cases referred through orthopedic clinics and through physicians, for consultation. Speech therapy, however, is restricted to registered cases only.

Hard-of-hearing cases are also accepted on a State-wide basis.

Since 1953, an evaluation program for the cleft palate child needing long-term care has been operative on a State-wide basis and is held four times yearly in the Portland area.

The report which follows is designed to illustrate a more detailed analysis of services received under the crippled children's program for the 2,305 active cases in the calendar year, 1958.

Physician's services include:

- 1) Clinic service wherein the child receives diagnosis, treatment, or follow-up care, by a physician in full-time attendance. It excludes visits to physical therapy clinics,

*Director, Maternal and Child Health and Crippled Children's Services.

**Director, Research and Statistics.

TABLE I

<i>Age group</i>	<i>Total</i>		<i>Boys</i>		<i>Girls</i>	
	<i>Number</i>	<i>Per Cent</i>	<i>Number</i>	<i>Per Cent</i>	<i>Number</i>	<i>Per Cent</i>
Total	2,305	100.0	1,269	100.0	1,036	100.0
Under 1	54	2.3	28	2.2	26	2.5
1 - 4	510	22.1	292	23.0	218	21.0
5 - 9	681	29.6	382	30.1	299	28.9
10 - 14	604	26.2	327	25.8	277	26.7
15 - 20	456	19.8	240	18.9	216	20.9

TABLE II

<i>Length of service</i>	<i>Total</i>		<i>Age</i>			
	<i>Number</i>	<i>Per cent</i>	<i>Under 1</i>	<i>1-4</i>	<i>5-9</i>	<i>15-20</i>
Total	2,305	100.0	54	510	1,285	456
Less than 1 year	688	29.9	54	234	323	77
1 year, less than 3	580	25.2	—	216	283	81
3 years, less than 5	402	17.4	—	60	272	70
5 years, less than 10	435	18.9	—	—	340	95
10 years, less than 15	144	6.2	—	—	67	77
15 years and over	56	2.4	—	—	—	56

TABLE III

<i>County</i>	<i>Children receiving service</i>		<i>Rank</i>	<i>Number of children under age 21 (1950 census)</i>	<i>Number of children receiving service per 1,000 children under age 21</i>	<i>Rank</i>
	<i>Number</i>	<i>Per cent</i>				
Total	2,305	100.0	—	336,934	6.8	—
Aroostook	438	19.0	1	44,546	9.8	2
Cumberland	409	17.7	2	58,181	7.0	9
Penobscot	254	11.0	3	40,408	6.3	10
Androscoggin	165	7.2	4	29,819	5.5	13
Kennebec	152	6.6	5	29,517	5.1	14
York	138	6.0	6	33,202	4.2	15
Oxford	125	5.4	7	16,751	7.5	7
Washington	105	4.6	8	12,807	8.2	4
Somerset	90	3.9	9	14,817	6.1	11
Waldo	89	3.9	10	8,083	11.0	1
Knox	84	3.6	11	8,997	9.3	3
Hancock	66	2.9	12	11,203	5.9	12
Franklin	63	2.7	13	7,925	7.9	6
Piscataquis	56	2.4	14	6,835	8.2	5
Lincoln	46	2.0	15	6,200	7.4	8
Sagadahoc	25	1.1	16	7,643	3.3	16

TABLE IV

<i>Type of service</i>	<i>Children who received specified service</i>		<i>Visits or days' care</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Average</i>
Total	1/ 2,305	1/ 100.0		
Clinic service	2,096	90.9	3,068	1.5
Hospital in-patient care	276	12.0	8,732	31.6
Convalescent-home care	2	2/	63	31.5
Other services by physician	516	22.4	687	1.3

1/ Unduplicated count of children who received service

2/ Less than 0.1 per cent

speech clinics, etc., which do not meet the above definition.

2) Hospital in-patient care financed from crippled children's funds.

3) Convalescent-home care financed from crippled children's funds.

4) Other service received from the physician for the child in his own home, in a foster home, in the physician's office, or elsewhere, except as part of a clinic, hospital, or convalescent-home care.

AGE AND SEX

Out of every 100 children who received service in 1958, 55 were boys and 45 girls. The median age for all was 9.4 years. Table I shows the age and sex distribution of the children who received services in 1958.

YEAR OF FIRST SERVICE

About 3 out of 10 children received services for the first time in 1958. The remaining children had received service prior to 1958. As shown in Table II more than 2 per cent of the children have been known to the crippled children's services for 15 years or more.

COUNTY OF RESIDENCE

Nearly one-half (47.7 per cent) of the children who received service in 1958 were residents of Aroostook, Cumberland and Penobscot counties. In Table III the counties have been ranked according to the number of children who received service in 1958, and by the rate per 1,000 children under age 21 who received service. It is to be noted that while Waldo County ranks 10th in the number of children who received service in 1958, it ranks first in the proportion of the child population receiving service.

VOLUME AND TYPE OF SERVICE

About nine out of 10 (90.9 per cent) of the children

who were given service were seen in clinics. Twelve per cent received hospital in-patient care, and 22.4 per cent received other services by physicians. Two children received convalescent-home care.

Table IV shows type and volume of services received.

CRIPPLING CONDITION

The primary diagnosis of each child is coded within the diagnostic report group prepared by the Children's Bureau and based on the International Statistical Classification of Diseases, Injuries and Causes of Death. In cases where a child has more than one diagnosis, classified in more than one of the diagnostic report groups, only the primary diagnosis is coded. The term "primary diagnosis" means the diagnosis which is most important to the child in relation to the services offered under the program.

Nearly one-half (47.5 per cent) of the children who received services fall into the five diagnostic report groups of: congenital malformation of the circulatory system (15.4 per cent); cerebral palsy (8.9 per cent); rheumatic heart disease (8.2 per cent); other congenital malformations (7.9 per cent); and flat foot (7.4 per cent).

Table V, on the opposite page, shows the distribution of children by diagnosis and by sex and age.

As the program proceeds, it is hoped that with the extension of the maternal and child health program, better integration of the preventive phases of the crippled children's program will be achieved and that greater emphasis can be placed on this aspect.

It is also contemplated that since there seems no possibility of increasing clinical services under the program within the near future, for financial reasons, services to flat-foot cases will be eliminated from the Register (except for 2nd and 3rd degree cases) and one visit offered at the orthopedic clinic for evaluation and recommendations only.

TABLE V

Diagnostic report group	Total		Sex		Age			
	Number	Per cent	Male	Female	Under 1	1-4	5-14	15-20
Total	2,305	100.0	1,269	1,036	54	510	1,285	456
Late effects of tuberculosis of bones and joint	9	0.4	8	1	—	—	5	4
Other tuberculosis, except respiratory	1	1/	1	—	—	—	1	—
Poliomyelitis, acute	1	1/	1	—	—	—	1	—
Poliomyelitis, late effects	95	4.1	56	39	—	3	69	23
Rickets, active	2	1/	1	1	—	2	—	—
Rickets, late effects	7	0.3	4	3	—	2	4	1
Cerebral palsy	206	8.9	111	95	4	41	127	34
Epilepsy	3	0.1	3	—	—	—	3	—
Other diseases of the nervous system and sense organs, except eye, ear and mental disorders	23	1.0	11	12	—	5	11	7
Other diseases of the eye, except congenital or diabetic cataract	8	0.5	6	2	—	3	5	—
Deafness and impairment of hearing	74	3.2	44	30	—	12	45	17
Other diseases and conditions of the ear	15	0.7	8	7	—	—	11	4
Rheumatic fever, acute	13	0.6	10	3	—	1	8	4
Chronic rheumatic heart disease	189	8.2	96	93	—	3	94	92
Other diseases of the heart, except congenital malformations	68	3.0	37	31	—	2	39	27
Arthritis and rheumatism, except rheumatic fever	13	0.6	5	8	—	1	6	6
Osteomyelitis and periostitis	15	0.7	7	8	—	2	13	0
Curvature of spine, except congenital or late effect of poliomyelitis or tuberculosis	40	1.7	12	28	—	—	22	18
Flatfoot, acquired or unspecified	171	7.4	92	79	1	70	87	13
Other diseases of the bones and organs of movement, except congenital malformations	108	4.7	60	48	—	23	62	23
Spina bifida and meningocele	32	1.4	13	19	4	9	14	5
Congenital malformations of the circulatory system	347	15.1	195	152	12	80	202	53
Cleft palate and harelip	165	7.2	92	73	10	52	85	18
Congenital dislocation of hip	13	0.6	0	13	—	6	5	2
Clubfoot, congenital or unspecified	137	5.9	83	54	7	58	61	11
Flatfoot, congenital	3	0.1	1	2	—	—	3	—
Other congenital malformations	181	7.9	116	65	11	66	83	21
Injuries at birth, except cerebral palsy and epilepsy	32	1.4	18	14	1	8	21	2
Burns	30	1.3	19	11	—	6	16	8
Other morbid conditions due to accidents, poisonings, and violence	48	2.1	33	15	1	4	23	20
Other diagnosed diseases, injuries or handicapping conditions	48	2.1	22	26	—	10	29	9
Provisional or deferred diagnoses	130	5.6	63	67	1	27	81	21
Examination made, no abnormality reported	78	3.4	41	37	2	15	48	13

1/ Less than 0.1 per cent

REPORT OF COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee on Medical Education and Hospitals of the Maine Medical Association met on November 22, 1959 in Brunswick, Maine and discussed the following matters.

It was unanimously voted to delete the following portion of Chapter VII, Section 5 of the By-Laws pertaining to the Committee on Medical Education and Hospitals: "(1) to keep itself constantly informed concerning the relations between physicians and hospitals;"

This action was taken inasmuch as no business concerning the relations between physicians and hospitals has been referred to this committee in the last five years; the committee feels that such matters more properly concern a Bureau on Ethics and Discipline and that it has sufficient concern, requiring all its energy, in the matter of the education of the youths planning to enter the field of medicine and in the continued pursuit of knowledge by the licensed physicians of the state.

After a lively discussion the following recommendations were made to be submitted as proposals to the members of the Maine Medical Association and its House of Delegates:

1. That a central Bureau of Medical Education be established under the auspices of Dr. Daniel F. Hanley, Executive Director of the Maine Medical Association, to coordinate the various education programs in the hospitals and medical societies throughout the State of Maine.
2. That a qualified group of speakers be culled from various associations, such as The American Heart Association, The American Cancer Society, Maine Division, Inc., The Trudeau Society, etc. willing, on invitation by the staff, to travel to different parts of the state and put on programs of medical interest.
3. That a questionnaire be submitted to the members of the Maine Medical Association to find out what type of postgraduate education they are most interested in.
4. That the American Association of General Practitioners be commended for its efforts encouraging its members to take advantage of meetings and courses so as to further and continue their medical education.
5. That the medical association take a more active part in stimulating young men and women to enter the field of medicine. It was noted that Maine has the lowest number of premedical and medical students in proportion to population of any state in the union. To counteract this unhappy state of affairs it was proposed that the members of the medical profession take the lead in establishing a scholarship fund (perhaps by a voluntary contribution of \$25 annually by each member) which could then be bolstered by contributions from other sources.

The committee heard an excellent discussion by Dr. Laurance B. Ellis regarding the postgraduate medical program in Massachusetts.

Necrologies

LEOPOLD O. ROY, M.D.

1880 - 1959

Leopold O. Roy, M.D., a General Practitioner in Lewiston for forty-six years, died October 5, 1959.

Dr. Roy was born in St. Michel, Bellechasse, Quebec on July 17, 1880, the son of Onesime and Mathilda Soulet Roy. He was educated at the Quebec Seminary and Laval University and received his medical degree from Laval University Medical School in 1906. While serving in World War I in 1918, he had postgraduate training at Camp Greenleaf, Georgia. In 1921 he went to Paris, France for seven months' study and in 1932 he went to Boston for more graduate clinical work.

After a short stay in Van Buren, Maine, Dr. Roy located

in Augusta in 1909. In 1913 he moved to Lewiston where he remained until his death. He was a member of the staff of St. Mary's General Hospital in Lewiston.

In 1956 the Androscoggin County Medical Society and the Maine Medical Association recognized Dr. Roy's 50 years of the practice of medicine by making him an honorary member. He was also a member of the American Medical Association.

Dr. Roy is survived by his widow, the former Anna Cloutier of Lewiston, whom he married in 1919, one son, Robert Roy, M.D., a specialist in gynecology and obstetrics in Miami, Florida, and five grandchildren.

LOUIS L. THERIAULT, M.D.

1893 - 1959

Louis L. Theriault, M.D., of Wethersfield, Connecticut, who practiced in Maine for 37 years until his retirement in 1956, died August 30, 1959 at his summer home on Cranberry Island, Maine.

Dr. Theriault was born in Van Buren, Maine on April 10, 1893, the son of Joseph F. and Euphemia Farrell Theriault. He was a graduate of St. Mary's College, Van Buren, and received his medical degree from Jefferson Medical College, Philadelphia, in 1918. He interned at St. Joseph's Hospital, Philadelphia, until 1919 and attended postgraduate courses at the Presbyterian Hospital, also in Philadelphia, in 1926.

Dr. Theriault practiced in Van Buren, Stockholm and

Presque Isle for ten years before locating in Old Town in 1929 where he remained until 1956.

Dr. Theriault was a member of the Penobscot County Medical Society, the Maine Medical Association and the American Medical Association. He was also a member of the 4th degree Knights of Columbus in Old Town.

Surviving are his wife, Mary Reehil Theriault of Wethersfield, Connecticut and Cranberry Island; a son, Lt. Cmdr. John Theriault, U.S.N.; a daughter, Mrs. Albert Gray of Wethersfield; two sisters, Sister Mary Regina of Rome, Italy, and Mrs. Marcelle Albert of Wethersfield; a brother, Emery Theriault of Washington, D.C.; four grandchildren and several nieces and nephews.

Deceased

CUMBERLAND

James M. Parker, M.D., 18 Bramhall Street, Portland, November 17, 1959

HANCOCK

Charles C. Knowlton, M.D., 57 Main Street, Ellsworth, November 23, 1959

COUNTY SOCIETIES

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Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

President, Robert B. Somerville, M.D., Presque Isle
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Secretary, C. W. Kinghorn, M.D., Kittery

County Society Notes

KENNEBEC

November 19, 1959

The November meeting of the Kennebec County Medical Society was held on November 19, 1959 at the Veterans Administration in Togus.

Resolutions were presented on the death of Dr. Curtis W. Dyer of Augusta. They were read by Dr. Wilson H. McWethy in the absence of Dr. Henry A. Brann, chairman. Dr. Roland L. McKay is also a member of this committee.

A nominating committee consisting of M. Tieche Shelton, M.D., Frank B. Bull, M.D. and Arthur H. McQuillan, M.D. was appointed by the president. He also appointed to the Grievance Committee, Irving Goodof, M.D., Ivan E. McLaughlin, M.D. and William Runyon, M.D.

The speaker of the evening was John R. Graham, M.D., Chief of Medicine, Faulkner Hospital, Jamaica Plain, Boston. His subject was "Some Clinical Aspects of Headache."

ARCH H. MORRELL, M.D.
Secretary

WASHINGTON

October 30, 1959

A combined meeting of the Washington County Medical Society and the St. Croix Medical Society was held in the Congregational Vestry at East Machias, Maine on Friday, October 30, 1959 with eighteen members and guests present.

After an excellent dinner served by members of The Ladies Union Society, Rowland French, M.D. of Eastport, Maine presided at a short business meeting during which time the following officers were elected for the year:

President: Harold G. Sears, M.D., Woodland
Vice-President: Rowland B. French, M.D., Eastport
Secretary-Treasurer: Karl V. Larson, M.D., East Machias
Delegate to Maine Medical Association: James C. Bates, M.D., Eastport

Alternate: Perley J. Mundie, M.D., Calais

Allan Woodcock, M.D. of Bangor, Maine, president of the Maine Medical Association, spoke on the activities of the Association. He requested members to come to Bangor, Maine on December 11 and 12, 1959 for the clinical meeting of the Maine Medical Association.

Dr. French then introduced Dr. George Robertson of Waterville, Maine, Medical Director of the Sister's Hospital, who spoke on Geriatric Problems.

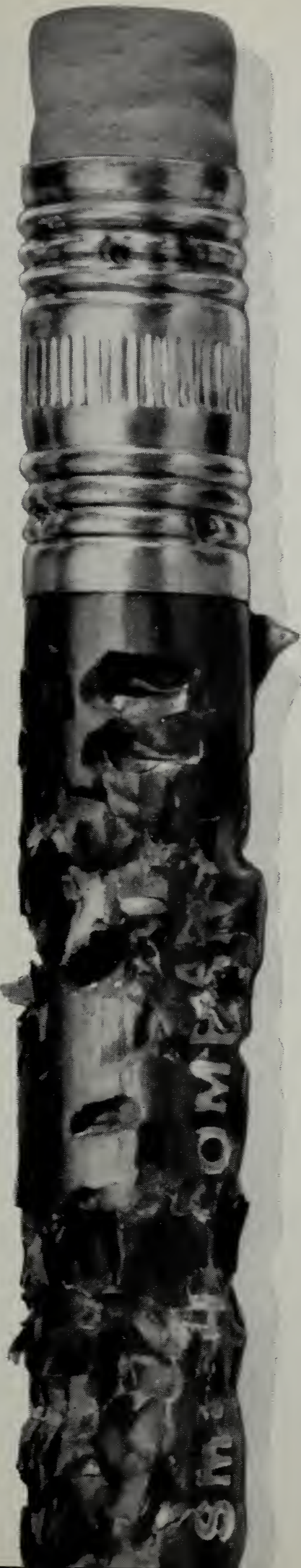
A short business meeting of the St. Croix Medical Society was presided over by Herbert Everett, M.D., St. Stephen, New Brunswick.

KARL V. LARSON, M.D.
Secretary

New Member

PENOBSCOT

Edward J. Hughes, M.D., 255 North Main Street, Brewer, Maine



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Clinical reports on Dartal: 1. Edisen, C. B., and Samuels, A. S.: A.M.A. Arch. Neurol. & Psychiat. 80:481 (Oct.) 1958.
2. Ferrand, P. T.: Minnesota Med. 41:853 (Dec.) 1958.
3. Mathews, F. P.: Am. J. Psychiat. 114:1034 (May) 1958.

SEARLE

News and Notes

Project Hope Selects Chief Medical Officer

Paul E. Spangler, M.D., of Monterey, California has been selected as Senior Medical Officer of Project HOPE, the undertaking which will send the hospital ship CONSOLATION to Southeast Asia early next year in an effort to bring advanced medical training to the health professions of friendly countries overseas.

Dr. Spangler is the first physician to be chosen from more than 1,000 applicants. The permanent hospital staff aboard the ship will be made up of 15 physicians, two dentists, 20 nurses and about 20 auxiliary medical personnel. In addition, about 35 physicians will be flown to the ship every four months on a rotating basis. Additional members of the hospital ship staff will be chosen within a short time.



A graduate of Harvard Medical School, Dr. Spangler has had 35 years' experience in general surgery, 17 of which were in the U. S. Navy and is a Diplomat of the American Board of Surgery. Recently retired with the rank of Captain, Dr. Spangler had served as Chief of Surgery at five Naval Hospitals and on the U. S. Hospital Ship REPOSE, a sister-ship of the CONSOLATION. Stationed at Pearl Harbor on December 7, 1941, Dr. Spangler is credited with performing the first operation in the U. S. Armed Forces in World War II.

The \$3.5 million needed to operate the ship for a year is currently being raised through voluntary contributions by individuals, corporations, businesses, labor unions and other groups throughout the country.

Contributions may be sent to Project HOPE, P. O. Box 9808, Washington 15, D. C.

Graduate Training Award To Maine Physician

The 1959 Mead Johnson awards for graduate training in anesthesiology were granted recently to three physicians, one of whom is from Lewiston, Maine. The announcement was made by Daniel C. Moore, M.D., Seattle, Washington, president of the American Society of Anesthesiologists, at the annual meeting in Chicago. The scholarships, which are the second annual group of awards by the Society to deserving students planning careers in anesthesiology, are made possible by funds granted by Mead Johnson & Company, Evansville, Indiana.

John W. Friend, M.D., who has been a resident physician in anesthesiology at Central Maine General Hospital, Lewiston, is the Maine recipient. Married and the father of three children, Dr. Friend was graduated from the Long Island College of Medicine in 1945 and interned at Norwegian Hospital, Brooklyn, New York. For six years he was in general practice in North Anson and Farmington, Maine.

The Mead Johnson Awards are made to physicians already engaged in residency training for specialization in anesthesiology and are granted to deserving physicians on the basis of meritorious work in clinical and research fields and general qualifications for success in the specialty.

Dr. Swett Elected By Two Medical Groups

Clyde I. Swett, M.D., Island Falls, Maine, was elected President of the New England Society of Obstetrics and Gynecology for 1959-1960 at their recent annual meeting at the Somerset Hotel in Boston. Also the Pan-American Medical Association in Chicago recently announced that Dr. Swett has been elected a member of their Council.

A member of the Aroostook County Medical Society, he has been Secretary-Treasurer of that group for many years. Dr. Swett's other activities include being Deputy Director of Civil Defense for Maine, Vice-President of the Maine Section of the American Society of Clinical Hypnosis, on the Disaster Medical Care and Health Insurance Committees of the Maine Medical Association and President of the Maine Lions Sight Conservation Association.

New England Urologists Hold Annual Session

The four-day annual meeting of the New England Section of the American Urological Association was held at Poland Spring, Maine from October 7 through 10, 1959. More than 100 specialists reviewed the latest developments in their field as 21 clinical and scientific papers were read. Among the topics covered were kidney transplants, diagnosis by using radioactive tracers, methods of relieving hypertension due to kidney ailments and intestinal grafting.

Dr. David B. Stearns of Boston was installed president of the association at the close of the meeting. He succeeds Dr. Earl E. Ewart, also of Boston.

Dr. Bowman Appointed Consultant By National Association

Peter W. Bowman, M.D., Superintendent, Pineland Hospital and Training Center, Pownal, has been appointed as consultant of the American Psychiatric Association for a Mental Health Survey of the Province of British Columbia, Canada.

Historic Maine X-rays

The Maine Medical Center recently honored two Maine X-ray pioneers by creating a permanent display in the hospital's X-ray department. Following a report in 1896 of Dr. W. C. Roentgen's discovery of the X-ray, Drs. Gilbert M. Elliott and Charles C. Hutchins made the first X-ray tube to be built outside Germany. Then they made the nation's first "posed" photograph by X-ray of Dr. Elliott's hand in a 25-minute exposure. Later in the year the two men — for the first time in Maine and the first or second time in America — assisted a surgeon in locating by X-ray a bullet hidden in an ankle.

Dr. Elliott, a Brunswick physician, later dropped his interest in X-rays and his pioneering part is obscure in medical history. Dr. Hutchins, a Bowdoin physics professor, continued and achieved considerable fame.

On display are copies of the X-ray of the ankle showing the embedded bullet, the original X-ray of Dr. Elliott's hand and an X-ray tube built in 1896 by the two scientists.

Announcements

National Foundation Fellowship Program

The first fellowship program to provide training for medical students specifically in genetics and embryology was announced by Basil O'Connor, president of The National Foundation. Under the new fellowship program, effective January 1, 1960, every approved medical school in the country may nominate one student who wishes to undertake a research program in genetics or embryology.

Fellowships to allow medical students to spend their vacation periods in research were initiated by The National Foundation in 1951. This program was later expanded to include clinical experience for students interested in rehabilitation and public health and preventive medicine. The purpose of medical student fellowships is to give students early opportunities to discover their aptitude for becoming scientific investigators.

American Board Of Obstetrics And Gynecology

The next scheduled examinations (Part II), oral and clinical, for all candidates, will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from April 11 through 16, 1960. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations as soon as possible.

Current Bulletins of the American Board of Obstetrics and Gynecology, outlining the requirements for application, may be obtained by writing to the Secretary, Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

American Medical Association Regional Health Conference

The A.M.A. Regional Health Conference for New England will be held April 22, 1960 at the University of Massachusetts, Amherst, Massachusetts.

The topics that will be covered are diseases transmissible to humans from animals, family immunizations, poisoning in farm and home, and home nursing care in the community. Write to Norman H. Gardiner, M.D., vice Chairman, Council on Rural Health, American Medical Association, East Hampton, Connecticut, for further information.

Pineland Hospital And Training Center Pownal, Maine Carl Hedin General Hospital Red Room

1960			
January 7	Lecture — Clinicopathological Conference	10:00 A.M.	
January 14	Lecture — Demyelinating Diseases (pathol. anat.)	11:00 A.M.	
January 21	Lecture — Demyelinating Diseases (clinic)	11:00 A.M.	
January 28	Lecture — Psychoneuroses	11:00 A.M.	

Department Of Health And Welfare Division Of Maternal And Child Health Including Services For Crippled Children

Orthopedic Clinics

Portland — Maine Medical Center	9:00 a.m.: Jan. 11, Feb. 8, Mar. 14
Lewiston — Central Maine General Hospital	9:00 a.m.: Jan. 15, Feb. 19, Mar. 18
Rumford — Community Hospital	1:30 p.m.: Mar. 16
Waterville — Thayer Hospital	1:30 p.m.: Feb. 25
Rockland — Knox County Hospital	1:30 p.m.: Feb. 18
Machias — Washington County Normal School	1:30 p.m.: Jan. 13
Presque Isle — Northern Maine Sanatorium	9:00 a.m. and 12:30 p.m.: Jan. 12, Mar. 9
Houlton — Aroostook General Hospital	9:00 a.m.: Mar. 8
Fort Kent — Peoples Benevolent Hospital	10:00 a.m.: Jan. 13
Bangor — Eastern Maine General Hospital	1:00 p.m.: Jan. 28, Mar. 24 (Several will be two sessions)

Cardiac Clinics

Portland — Maine Medical Center	9:00 a.m.: Every Friday (Holidays Excepted)
Bangor — Eastern Maine General Hospital	9:00 a.m.: Jan. 8, 29, Feb. 12, 26, Mar. 11, 25

Cleft Palate Evaluation Clinics

Portland — Maine Medical Center	10:00 a.m.: Feb. 9
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Pediatric Clinics

Bangor — Eastern Maine General Hospital	1:30 p.m.: Jan. 29, Feb. 26, Mar. 25
Fort Kent — Peoples Benevolent Hospital	10:00 a.m.: Mar. 23
Presque Isle — Northern Maine Sanatorium	1:30 p.m.: Jan. 27
Waterville — Thayer Hospital	1:30 p.m.: Jan. 5, Feb. 2, Mar. 1

Clinics For Mentally Retarded Pre-School Children

Waterville — Thayer Hospital	9:00 a.m.: Jan. 6, 20, Feb. 3, 17, Mar. 2, 16, 30
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Adolescent Clinics

Portland — Maine Medical Center	1:00 p.m.: Jan. 27, Feb. 24, Mar. 23
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Hawaii Medical Association

The Hawaii Medical Association invites members to attend the 104th Annual Meeting to be held in Honolulu May 12, 13, 14, and 15, 1960. This is the first meeting under statehood, and there will be an exceptional program of scientific and social events.

Write Toru Nishigaya, M.D., President, Hawaii Medical Association, 510 South Beretania Street, Room 200, Honolulu 13, Hawaii, for further information.

American Diabetes Association

The Eighth Postgraduate Course in Diabetes and Basic Metabolic Problems of the American Diabetes Association will be held in Los Angeles, California, on January 20, 21 and 22, 1960. The Course which is open to Doctors of Medicine is presented under the direction of the Committee on Professional Education of the American Diabetes Association. The Ambassador Hotel will serve as the headquarters hotel. The fee for the three-day Course for members of the American Diabetes Association is \$40 and \$75 for non-members.

Topics for the three day session will be Fundamentals of Diabetes, Diagnostic And Therapeutic Considerations, Clinical Sessions In Diabetes, Or Diabetes In Review, Vascular Complications Of Diabetes and Diabetes On The Research Frontier.

For further information write to J. Richard Connelly, Executive Director, American Diabetes Association, Inc., 1 East 45th Street, New York 17, N. Y.

The American College Of Allergists

The American College of Allergists Graduate Instructional Course and Annual Congress will be held February 28 through March 4, 1960 at the Americana Hotel, Bal Harbour, Miami Beach, Florida.

For further information contact, John D. Gillaspie, M.D., Treasurer, 2049 Broadway, Boulder, Colorado.

American Rhinologic Society

A seminar in "Reconstructive Surgery of the Nasal Septum and External Nasal Pyramid" will be held in New Orleans, February 10 to 13, 1960 under the auspices of the Department of Otolaryngology (Dr. Val Fuchs, chairman) Louisiana State University Medical School and the Charity Hospital.

The American Rhinologic Society will co-operate in the presentation. Its founder, Dr. Maurice H. Cottle, professor of otolaryngology, Chicago Medical School, will be the guest director, and Dr. H. Ashton Thomas of L. S. U. will be the executive director.

The American Rhinologic Society has elected the following officers for 1959-1960: President: Dr. Roland M. Loring,

Chicago; president-elect: Dr. Ivan W. Philpott, Denver; vice president: Dr. Raymond L. Hilsinger, Cincinnati; secretary: Dr. Robert M. Hansen, Portland, Oregon; treasurer: Dr. George G. Fischer, Wilmette, Illinois; regional directors: Drs. Leland R. House, Los Angeles; Lewis E. Morrison, Indianapolis; and Amos E. Friend, Manchester, Connecticut.

American College Of Surgeons Boston Meeting

Surgeons, nurses and related medical personnel from throughout the country are invited to attend a comprehensive, four-day Sectional Meeting of the American College of Surgeons in Boston, Massachusetts, February 29 through March 3, 1960. Headquarters will be the Statler Hilton and Sheraton Plaza hotels, with many sessions scheduled at leading Boston hospitals.

The four-day meeting will include sessions in general surgery and separate programs in the surgical specialties for gynecologists and obstetricians, ophthalmic surgeons, orthopedic surgeons, otolaryngologists, thoracic surgeons, urologists, and nurses. For further information write to Mr. Robert M. Cunningham, American College Of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

Western Reserve University

The Law-Medicine Center of Western Reserve University in Cleveland, Ohio, will offer a two-day institute on "The Back: A Law-Medicine Problem Reappraised." The institute will be held in the Hatch Auditorium of the Newton D. Baker Building on the Western Reserve University campus February 12 and 13, 1960 from 9 a.m. to 4:30 p.m. each day. The fee for this institute is \$25 and housing facilities will be available.

For registration or information contact Oliver Schroeder Jr., The Law-Medicine Center, Western Reserve University, Cleveland 6, Ohio.

Essay Awards, American Congress Of Physical Medicine And Rehabilitation

The American Congress Of Physical Medicine And Rehabilitation announces that three cash awards will be given to the winner of the 7th Essay Award, the 3rd Bernard M. Baruch Essay Award, and May 2, 1960 for the R. D. Grant Company Award. Manuscripts must be sent to the office of the American Congress of Physical Medicine and Rehabilitation not later than March 1, 1960 for the 7th Essay Award and the 3rd Bernard M. Baruch Award, and May 2, 1960 for the R. D. Grant Company Award.

For further information write to the American Congress of Physical Medicine and Rehabilitation, 30 N. Michigan Ave., Chicago 2, Illinois.

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of the

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Supplement to

The Journal of the Maine Medical Association

Volume 50, Number 6

June, 1959

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Union
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22 White St., Rockland
22 White St., Rockland
96 Limerock St., Rockland
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44 Mountain St., Camden
22 White St., Rockland
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 Head, Owen B. 98 Main St., Sanford
 Larochelle, Joseph R. 42 Bacon St., Biddeford
 Sever, James W. Cape Neddick
 Stickney, Laura B. 10 Cutts Ave., Saco
 Whitney, Ray L. Cape Porpoise

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 Kinghorn, Charles W. 4 Wentworth St., Kittery
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An Alphabetical List of the Members of the Maine Medical Association

* The figures in parentheses refer to County Societies as follows: (1) Androscoggin, (2) Aroostook, (3) Cumberland, (4) Franklin, (5) Hancock, (6) Kennebec, (7) Knox, (8) Lincoln-Sagadahoc, (9) Oxford, (10) Penobscot, (11) Piscataquis, (12) Somerset, (13) Waldo, (14) Washington, (15) York.

A

Adams, Asa C., 68 Main St., Orono (10)
 Adams, Lester, 9 Knox St., Thomaston (9)
 Adams, Winford C., 255 North Main St., Brewer (10)
 Agan, Robert W., 144 State St., Portland (3)
 Akar, Hamdi, 17 Grove St., Bath (8)
 Akerberg, Ake, 10 Maple St., South Paris (9)
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 Albert, Joseph L., Fort Kent (2)
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 Allen, Robert L., 22 White St., Rockland (7)
 Ames, Forrest B., 255 Hammond St., Bangor (10)
 Amrein, H. Carl, 29 Weston Ave., Madison (12)
 Anderson, Donald L., 369 Main St., Lewiston (1)
 Andrews, John F., 20 West St., Boothbay Harbor (8)
 Ansell, Harvey B., 39 Deering St., Portland (3)
 Anton, Thomas, 260 Main St., Biddeford (15)
 Apollonio, Howard L., 22 White St., Rockland (7)
 Applin, Hilton H., 6 Cumberland St., Brunswick (3)
 Aranson, Albert, 39 Deering St., Portland (3)
 Archambault, Philip L., 346 Main St., Lewiston (1)
 Armstrong, Charles M., Robbinston (14)
 Asali, Louis A., 29 Deering St., Portland (3)
 Asherman, Edward G., 31 Deering St., Portland (3)
 Ashley, Alta, Dist. III, Health Office, Augusta (6)
 Aucoin, Peter B., 89 Congress St., Rumford (9)
 Aungst, Melvin R., Morneault Building, Fort Kent (2)

B

Babalian, Leon, 38 Deering St., Portland (3)
 Babcock, Albert L., 316 State St., Bangor (10)
 Babcock, Edward B., 115 Wilson St., Brewer (10)
 Babcock, Harold S., Castine (5)
 Bachrach, Louis, 16 Union St., Brunswick (3)
 Bacon, Melvin, 257A Main St., Sanford (15)
 Baldini, Elio, 22 Bramhall St., Portland (3)
 Baldwin, Warren C., 42 Deering St., Portland (3)
 Ball, Franklin P., Bingham (12)
 Barker, Nathaniel B. T., 1 South St., Yarmouth (3)
 Barnard, John M. H., 21 Western Ave., Augusta (6)
 Barrett, Robert J., Jr., 209 State St., Bangor (10)
 Barrows, Harris C., 5 Oak St., Boothbay Harbor (8)
 Bates, James C., Eastport (14)
 Bauman, Clair S., 159 Silver St., Waterville (6)
 Bean, H. Richard, 171 Main St., Norway (9)
 Beaudet, Simon C., 25 Webster St., Lewiston (1)
 Beckerman, Stanley C., 82 Elm St., Waterville (6)
 Beeker, Vincent H., 85 Wood St., Lewiston (1)
 Beegel, Paul M., 80 Goff St., Auburn (1)
 Beliveau, Bertrand A., 56 Howe St., Lewiston (1)
 Beliveau, Romeo A., 89 Pine St., Lewiston (1)
 Belknap, Samuel L., Damariscotta (8)
 Bennet, DaCosta F., 4 Main St., Lubec (14)
 Bennet, Eben T., 49 Deering St., Portland (3)
 Bergmann, Jerome W., 255 Western Prom., Portland (3)
 Bernard, Albert J., 198 Madison Ave., Skowhegan (12)
 Berrie, Lloyd H., 64 Sweden St., Caribou (2)
 Bettie, Ronald A., 32 Federal St., Brunswick (3)
 Betts, Anthony, Maine Medical Center, Portland (3)
 Bidwell, Robinson L., 31 Bramhall St., Portland (3)
 Bischoffberger, John M., Naples (3)
 Bishop, Lloyd W., 211 Vaughan St., Portland (3)
 Black, Paul E., Capt., Naval Air Station, Brunswick (3)
 Blackburn, Nelson P., 489 State St., Bangor (10)
 Blaisdell, Carl E., 47 Broadway, Bangor (10)
 Blaisdell, Elton R., 12 Deering St., Portland (3)
 Blaisdell, William B., Jr., 47 Broadway, Bangor (10)
 Bliss, Raymond V. N., P. O. Box 361, Blue Hill (5)
 Blinder, Philip, 128 Broadway, Bangor (10)
 Bolduc, Jean L., 173 Main St., Waterville (6)
 Boone, Storer W., 429 Main St., Presque Isle (2)

Bostwick, George W., Route 1, River St., Newcastle (8)
 Bourassa, Harvey J., 15 Silver St., Waterville (6)
 Bove, Louis G., 12 Deering St., Portland (3)
 Bowman, Anneliese M., Maine Medical Center, Portland (3)
 Bowman, Peter W., P. O. Box C, Pownal (3)
 Bowne, Hays G., 9A Main St., Farmington (4)
 Boynton, Willard H., USOM/H&S Div., Box 32, Navy 150, c/o FPO, San Francisco, California (9)
 Bradbury, Francis W., 16 E. Main St., Dover-Foxcroft (11)
 Bramhall, Theodore C., 185 Craigie St., Portland (3)
 Branch, Charles F., Central Maine General Hospital, Lewiston (1)
 Brann, Henry A., 31 Western Ave., Augusta (6)
 Branson, Sidney R., 37 Main St., South Windham (3)
 Breard, J. Alfred, 15 Summer St., Waterville (6)
 Brennan, Thomas V., 555 Main St., Presque Isle (2)
 Bridges, Donald E., 209 State St., Bangor (10)
 Briggs, Paul R., Hartland (12)
 Brien, Maurice, 76 Pine St., Lewiston (1)
 Brinkman, Harry, 47 Perham St., Farmington (4)
 Broggi, Frank S., 18 Neal St., Portland (3)
 Broughton, David S., 18 Hartford St., Rumford (9)
 Brouwer, Johan, 56 Talbot Ave., Rockland (7)
 Brown, Eugene E., 57 Summit Ave., Bangor (10)
 Brown, Lloyd, 316 State St., Bangor (10)
 Brown, Luther A., 13 Deering St., Portland (3)
 Brown, Stephen S., Mars Hill (2)
 Buker, Edson B., R. F. D. No. 2, Auburn (1)
 Bull, Frank B., 72 Church St., Gardiner (6)
 Bundy, Harvey C., Milo (11)
 Bunker, Willard H., York Harbor (15)
 Burke, John E., 268 State St., Bangor (10)
 Burke, Paul W., 5 High St., Newport (10)
 Burnett, Claude A. Jr., 59 Deering St., Portland (3)
 Burns, Robert M., 582 Main St., Westbrook (3)
 Burr, Charles G., 90 Court St., Houlton (2)
 Burrage, William C., 57 Deering St., Portland (3)
 Busch, John J., 105 Elm St., Mechanic Falls (1)
 Butler, Harry, 77 Broadway, Bangor (10)
 Butterfield, Wilfred I., 119 Main St., Lincoln (10)

C

Cameron, Dwight, Rockend Rd., Northeast Harbor (5)
 Campbell, Fred G., Box 484, Warren (7)
 Canal, Ory D., Augusta State Hospital, Augusta (6)
 Capron, Charles W., 22 Bramhall St., Portland (3)
 Carde, Albert M., 33 Elm St., Milo (11)
 Carmichael, Frank E., 72 Deering St., Portland (3)
 Caron, Frederic J., 174 Bates St., Lewiston (1)
 Carrier, John W., Central Maine General Hospital, Lewiston (1)
 Carson, Robert S., 11 McKeen St., Brunswick (3)
 Carter, Loren F., Northern Maine San., Presque Isle (2)
 Carton, Arthur K., Market Square, Houlton (2)
 Casey, William L., 131 State St., Portland (3)
 Caswell, John A., 16 Waldo Ave., Belfast (13)
 Chapin, Milan A., 237 Turner St., Auburn (1)
 Charest, Leandre R., 314 Alfred St., Biddeford (15)
 Chase, George O., 144 State St., Portland (3)
 Chase, Philip B., 36 Main St., Farmington (4)
 Chason, Sidney, 173 Pine St., Bangor (10)
 Chasse, Richard L., 173 Main St., Waterville (6)
 Chatterjee, Manu, 11 McKeen St., Brunswick (3)
 Chenery, Frederick L. Jr., Monmouth (1)
 Christensen, Harry E., 400 Congress St., Portland (3)
 Clapp, Waldo A., 215 College St., Lewiston (1)
 Clapperton, Gilbert, 300 Main St., Lewiston (1)
 Clark, Frederick B., 131 State St., Portland (3)
 Clark, Richard I., 858 Washington St., Bath (8)
 Clarkin, Charles P., 64 Brookside Rd., Portland (3)
 Clement, James D., Jr., 77 Essex St., Bangor (10)

Clemett, Arthur R., 131 State St., Portland (3)
 Clough, Dexter J., 2nd, 224 State St., Bangor (10)
 Clough, Herbert T., Lt. Col., MC USAF, 108 West Kerr Dr.,
 Midwest City, Oklahoma (10)
 Cloutier, Wilfrid A., 210 Sabattus St., Lewiston (1)
 Cobb, Norman E., 132 Main St., Belfast (13)
 Cobb, Stephen A., 34 Winter St., Sanford (15)
 Coffin, Ernest L., Northeast Harbor (5)
 Coffin, Silas A., 39 High St., Bar Harbor (5)
 Cole, Donald P., 31 Deering St., Portland (3)
 Colley, Maynard B., Main St., Wilton (4)
 Collins, H. Douglas, Caribou Clinic, Caribou (2)
 Cook, Aaron, 23 High St., Waterville (6)
 Cooper, Llewellyn W., 194 Main St., Bar Harbor (5)
 Cornell, Robert C., 118 Forest Ave., Orono (10)
 Coulton, Donald, 326 State St., Bangor (10)
 Covert, Stanley B., Kingfield (4)
 Cox, William V., 133 Court St., Auburn (1)
 Cragin, Charles L., 831 Congress St., Portland (3)
 Craig, Allan, 41 E. 42nd St., New York 17, N. Y. (10)
 Crane, Lawrence, 265 Western Promenade, Portland (3)
 Crawford, Albert S., Box 414, Togus (6)
 Crawford, Joseph R., 105 Water St., Augusta (6)
 Cross, Harold D., Main Rd. & Summer St., Hampden High-
 lands (10)
 Crowe, James H., 121 Main St., Ellsworth (5)
 Cummings, George O., 47 Deering St., Portland (3)
 Cummings, George O., Jr., 47 Deering St., Portland (3)
 Cuneo, Kenneth J., 31 Summer St., Kennebunk (15)
 Cunningham, Allan R., R.F.D. 4, Belfast (13)
 Curran, Edward L., 209 State St., Bangor (10)
 Curtis, John B., 10 High St., Milo (11)
 Cutler, Lawrence M., 31 Grove St., Bangor (10)

D

D'Andrea, Anthony L., 868 Broadway, So. Portland (3)
 Dachslager, Philip, 21 Western Ave., Augusta (6)
 Damon, Albert H., Limestone (2)
 Daniels, Donald H., R.R. No. 1, Readfield (3)
 Darlington, Brinton T., Westwood Rd., Augusta (6)
 Davidson, David, 235 State St., Portland (3)
 Davidson, Gisela K., 235 State St., Portland (3)
 Davies, Lloyd G., Fryeburg (3)
 Davis, Ansel S., Springvale (15)
 Davis, Earle M., 34 Gilman St., Waterville (6)
 Davis, Harry E., 169 State St., Portland (3)
 Davis, Wirt L., 91 Bartlett St., Lewiston (1)
 Day, DeForest S., Wiscasset (8)
 Defoe, Garfield G., Dixfield (9)
 Denison, John D., 105 Brunswick Ave., Gardiner (6)
 Dennett, Carl G., Saco (15)
 Dennis, Richard H., 33 College Ave., Waterville (6)
 Dennison, Frederick C., 52 Main St., Thomaston (7)
 Derry, G. Hermann, 690 Congress St., Portland (3)
 Desjardins, Arthur U., South Bristol (8)
 Desjardins, Richard F., 240 Penobscot Ave., Millinocket (10)
 Devan, Thomas A., 10245-47th Ave., Corona, L. I., N. Y. (10)
 DeWitt, James C., R.F.D. No. 2, Ellsworth (10)
 Dietrich, Mary M., P. O. Box 3, Orrington (10)
 Dionne, Maurice J., 26-28 Cumberland St., Brunswick (3)
 Dionne, William E., 109 Main St., Springvale (15)
 Dixon, Walter G., 16 Deering St., Norway (9)
 Doble, Eugene H., 6 Church St., Presque Isle (2)
 Doble, Miriam, 990 Washington St., Bath (8)
 Dolan, Thomas F., Jr., 50 Union St., Ellsworth (5)
 Donahue, Clement L., 18 Sweden St., Caribou (2)
 Donahue, Gerald H., 4 Station St., Presque Isle (2)
 Donovan, Joseph A., Houlton (2)
 Dooley, Francis M., 53 Deering St., Portland (3)
 Dore, Clarence E., 2 School St., Waterville (6)
 Dore, Kenneth E., 133 Main St., Fryeburg (3)
 Dorogi, Louis V., 149 Main St., Freeport (3)
 Dorsey, F. Donald, 52 Deering St., Portland (3)
 Dougherty, John F., 112 Front St., Bath (8)
 Douphinett, Otis J., 763 Congress St., Portland (3)
 Downing, J. Robert, 35 Summer St., Kennebunk (15)
 Drake, Emerson H., 18 Bramhall St., Portland (3)
 Drummond, S. Dunton, Bar Mills (15)
 Duffey, Richard V., 187 North Main St., Brewer (10)
 Duffy, Wallace H., 100 Main St., Farmington (4)

DuMais, Alcid F., 125 College St., Lewiston (1)
 Dunham, Carl E., 188 State St., Portland (3)
 Dunham, Marguerite C., Northern Maine Sanatorium,
 Presque Isle (2)
 Dunham, Rand A., P.O. Box 68, East Millinocket (10)
 Dunn, Robert H., Veterans Administration, Togus (6)
 Dwyer, Clement S., 205 French St., Bangor (10)
 Dycio, George, 55 Broad St., Auburn (1)
 Dycio, Mary T., 30 Hall St., Lewiston (1)
 Dyhrberg, Norman E., 323 Main St., Cumberland Mills (3)

E

Earle, Ralph P., Vinalhaven (7)
 Earnhardt, Joseph B., 55 Stroudwater St., Westbrook (3)
 Eastman, Charles W., 18 Millet St., Livermore Falls (4)
 Ebbett, Penry L. B., Houlton (2)
 Eddy, Robert H., 23A Summer St., Rockland (7)
 Elsemore, Dexter E., 11 Main St., Dixfield (9)
 Emanuel, Meyer, Veterans Administration, Togus (6)
 Emerson, W. Merritt, 131 State St., Bangor (10)
 Emery, Frederick C., 242 Cedar St., Bangor (10)
 Endicott, Ruth E., 16 Main St., Ogunquit (15)
 English, Lena M., Veterans Administration, Togus (6)
 Eppinger, Ernst, 52 Belmont St., Portland (3)
 Ervin, Edmund N., 2 School St., Waterville (6)
 Etscovitz, Eli A., Cary Memorial Hospital, Caribou (2)
 Eves, John H., Thayer Hospital, Waterville (6)

F

Fagone, Francis A., 312 Congress St., Portland (3)
 Fahey, William J., 17 Frye St., Lewiston (1)
 Fallon, Richard N., 21 Western Ave., Augusta (6)
 Faucher, Francois J., Grand Isle (2)
 Fay, Thomas F., 98 Winthrop St., Augusta (6)
 Feeley, J. Robert, 316 State St., Bangor (10)
 Fennel, Peter J., Maine Medical Center, Portland (3)
 Fergus, Andrew, 128 Broadway, Bangor (10)
 Ferguson, Barbara, 80 Goff St., Auburn (1)
 Ferguson, Franklin F., 22 Arsenal St., Portland (3)
 Fichtner, Paul A., 6 Pleasant St., Rangeley (4)
 Ficker, Robert F., Maine St., Kennebunkport (15)
 Finks, Henry B., 73 Deering St., Portland (3)
 Fiorica, Gaetano, T., 12 Church St., Chisholm (4)
 Fish, Nicholas, 235 State St., Portland (3)
 Fisher, Dean H., State House, Augusta (6)
 Fisher, Samson, 173 Main St., Waterville (6)
 Fishman, Louis N., 327 Main St., Lewiston (1)
 Flanders, Merton N., 1 High St., Lewiston (1)
 Floyd, Paul E., 2 Middle St., Farmington (4)
 Fogg, C. Eugene, 35 Deering St., Portland (3)
 Fogg, Philip S., Jr., 27 Deering St., Portland (3)
 Fortier, Andre P., 68 Foss St., Biddeford (15)
 Fortier, Paul J. B., 70 Pine St., Lewiston (1)
 Foster, Albert D., Bay Shore Drive, Falmouth Foreside (3)
 Foster, Thomas A., 131 State St., Portland (3)
 Fox, Francis H., 83 West St., Portland (3)
 Freeman, William E., 107 Main St., Yarmouth (3)
 French, Rowland B., 16 Water St., Eastport (14)
 Frigault, Emile J., Church St., Eagle Lake (2)
 Frost, Harold M., Friendship (7)
 Frost, Robert A., 93 Summer St., Auburn (1)
 Fuller, Barbara L., 20 Chestnut St., Rockland (7)

G

Gabrielson, Robert M., Caribou Clinic Bldg., Caribou (2)
 Gaillard, Richard A., 268 State St., Bangor (10)
 Gates, Clifford W., Flaggy Meadow Rd., Gorham (3)
 Gauvreau, Horace L., 82 Pine St., Lewiston (1)
 Geer, Charles R., 690 Congress St., Portland (3)
 Geer, George I., Jr., 690 Congress St., Portland (3)
 Getchell, Ralph A., 690 Congress St., Portland (3)
 Geyerhahn, George, 73 Deering St., Portland (3)
 Gibbons, John F., 22 Arsenal St., Portland (3)
 Giberson, Raymond G., 555 Main St., Presque Isle (2)
 Giddings, Paul D., 31 Western Ave., Augusta (6)
 Giesen, Joseph H., 34 Gilman St., Waterville (6)
 Giguere, Eustache N., 90 Webster St., Lewiston (1)
 Gilman, Herbert C., 240 Penobscot Ave., Millinocket (10)

Gingras, Adolphe J., 99 Water St., Augusta (6)
 Gingras, Napoleon J., 6 East Chestnut St., Augusta (6)
 Glassmire, Charles R., 58 Deering St., Portland (3)
 Gloor, Robert F., Box 197, Corinna (10)
 Goduti, Richard J., 704 Congress St., Portland (3)
 Goldman, Morris E., 524 Main St., Lewiston (1)
 Good, Philip G., 38 Deering St., Portland (3)
 Goodof, Irving L., Thayer Hospital, Waterville (6)
 Goodrich, Blynn O., 165 Main St., Waterville (6)
 Goodwin, Ralph A., 56 Denison St., Auburn (1)
 Goodwin, Ralph A., Jr., 33 Court St., Auburn (1)
 Gormley, Eugene G., Market Square, Houlton (2)
 Gould, George I., 79 Main St., Richmond (6)
 Graves, Robert A., 3 Green St., Fort Fairfield (2)
 Gray, Philip L., Blue Hill (5)
 Greco, Edward A., 12 Pine St., Portland (3)
 Green, Ross W., 33 Court St., Auburn (1)
 Greene, John A., 96 Congress St., Rumford (9)
 Greene, John P., 19 Sabattus St., Lewiston (1)
 Greene, Merrill S. F., 466 Main St., Lewiston (1)
 Greenlaw, William A., 129 Main St., Fairfield (12)
 Gregory, Frederick J., 16 High St., Caribou (2)
 Gregory, Philip O., St. Andrews Hospital, Boothbay Harbor (8)
 Griffiths, Eugene B., 429 Main St., Presque Isle (2)
 Grow, William B., Central Maine Sanatorium, Fairfield (12)
 Guillemette, Maurice R., 109 Water St., Augusta (6)
 Guite, L. Armand, 45 Elm St., Waterville (6)

H

Haas, Carl M., 357 Elm St., Biddeford (15)
 Haas, Rudolph, 488 Main St., Lewiston (1)
 Hall, Walter D., 407 Main St., Rockland (7)
 Hall, Walter L. H., 130 Middle St., Old Town (10)
 Hallett, George W., Jr., 131 State St., Portland (3)
 Hamel, John R., 50 Deering St., Portland (3)
 Hamilton, Virginia C., 900 Washington St., Bath (8)
 Hamlin, Irvin E., Main St., East Millinocket (10)
 Hanley, Daniel F., 58 Federal St., Brunswick (3)
 Hannigan, Charles A., 85 Goff St., Auburn (1)
 Hannigan, Margaret H., 85 Goff St., Auburn (1)
 Hanson, Henry W., Jr., Cumberland Center (3)
 Harkins, Michael J., 437 Main St., Lewiston (1)
 Harlow, Edwin W., 177 Main St., Waterville (6)
 Harper, Harry L., 17 Main St., South Paris (9)
 Harrison, George J., Market Sq., Houlton (2)
 Harvey, Thomas G., 46 So. Main St., Caribou (2)
 Hawkes, Richard S., 47 Deering St., Portland (3)
 Hawkins, Donald B., Atlantic and Sea Sts., Camden (7)
 Hayward, I. Mead, Jr., 18 Sweden St., Caribou (2)
 Head, Owen B., 98 Main St., Sanford (15)
 Heath, Parker, Jr., 22 White St., Rockland (7)
 Hecht, Henry, 326 Stevens Ave., Portland (3)
 Hedin, Carl J., Penobscot Terrace, Brewer (10)
 Heifetz, Ralph, 173 State St., Portland (3)
 Helfrich, Harry M., Jr., 555 Main St., Presque Isle (2)
 Helfrich, Nancy R., 555 Main St., Presque Isle (2)
 Herbert, Walter W., Eastern Memorial Hospital, Ellsworth (5)
 Herrick, Stanley E., Jr., 12 Deering St., Portland (3)
 Herring, Leon D., 1 Western Ave., Winthrop (6)
 Herson, Joseph H., Main St., Patten (2)
 Hiebert, Joelle C., Jr., 369 Main St., Lewiston (1)
 Higgins, Everett C., 149 College St., Lewiston (1)
 Higgins, George I., 15 Water St., Newport (10)
 Hill, Allison K., 113 Somerset St., Bangor (10)
 Hill, Douglas R., 855 Sawyer St., South Portland (3)
 Hill, Frederick T., Thayer Hospital, Waterville (6)
 Hill, Howard, F., 33 College Ave., Waterville (6)
 Hill, Paul S., Jr., 323 Main St., Saco (15)
 Hinckley, Harris, 331 Cottage Rd., South Portland (3)
 Hirschberger, Celia, 44 Main St., Waterville (6)
 Hirshler, Max, 25 Bardwell St., Lewiston (1)
 Hochschild, Hugo, 33 Main St., Thomaston (7)
 Hoffman, Alvin A., P. O. Box 222, York (15)
 Hogan, Chester F., 62 Main St., Houlton (2)
 Holt, C. Lawrence, 27 Deering St., Portland (3)
 Hopkins, Herbert J., 24 Portland Ave., Old Orchard (15)
 Hopping, John S., Beaver Lodge Rd., Hope (7)
 Hornberger, H. Richard, 2 School St., Waterville (6)

Hornstein, Louis S., 220 Water St., Skowhegan (12)
 Horsman, Donald H., 50 Goff St., Auburn (1)
 Horton, George H., 247 Hammon St., Bangor (10)
 Houle, Marcel P., 200 Alfred St., Biddeford (15)
 Houlihan, John S., 209 State St., Bangor (10)
 Howard, George C., Oak St., Guilford (11)
 Howard, Henry M., 105 Franklin St., Rumford (9)
 Hsu, Theodore S., 14 High St., Ellsworth (5)
 Hubbard, Roswell E., Waterford (9)
 Hudson, Henry A., 11 Gage St., Bridgton (3)
 Humphreys, Ernest D., 91 Main St., Pittsfield (12)
 Huntress, Roderick L., 988 Sawyer St., South Portland (3)
 Hurd, Allan C., 72 Church St., Gardiner (6)
 Hutchins, Deane L., 69 Townsend Ave., Boothbay Harbor (8)

I

Irwin, Carl W., 262 State St., Bangor (10)
 Ives, Howard R., 31 Deering St., Portland (3)

J

Jackler, Jacob M., 14 Gilman St., Waterville (6)
 Jackson, Norman M., 89 Congress St., Rumford (9)
 Jacob, Donald R., Princeton (14)
 Jacobson, Payson B., 295 Brighton Ave., Portland (3)
 James, Chakmakis, 47 Howe St., Lewiston (1)
 James, John A., 117 Goff St., Auburn (1)
 Jameson, C. Harold, Medical Arts Building, Rockland (7)
 Jamieson, James G. S., (No address) (3)
 Jellerson, Leon R., Elm St., North Berwick (15)
 Jennings, Richard K., American Embassy, Belgrade, Yugoslavia, c/o Dept. of State, Washington 25, D.C. (5)
 Johnson, Albert C., 45 Deering St., Portland (3)
 Johnson, Gordon N., P. O. Box 86, Houlton (2)
 Johnson, Henry P., 32 Deering St., Portland (3)
 Johnson, James H., Jr., 36 Elm St., Milo (11)
 Johnson, Oscar R., 18 Deering St., Portland (3)
 Johnson, R. Paul, Main St., Fort Kent (2)
 Johnston, James S., York Harbor (15)
 Jones, Paul A., Union (7)
 Joost, Arthur M., Jr., P. O. Box B, Bucksport (5)
 Jordan, W. Edward, Jr., 68 Water St., Skowhegan (12)
 Junda, Rudolph, 85 Pine Ridge Rd., Newton, Mass. (2)

K

Kadi, Francis J., Bangor State Hospital, Bangor (10)
 Kagan, Samuel H., 283 Water St., Augusta (6)
 Kay, Edwin, 31 Frye St., Lewiston (9)
 Kazutow, John, P. O. Box 24, Ellsworth (14)
 Kellogg, Robert O., 316 State St., Bangor (10)
 Kershner, Warren E., 57 Green St., Bath (8)
 Kibbe, Frank W., 22 White St., Rockland (7)
 Kiel, Joseph B., Columbia Falls (14)
 Kimball, Herrick C., P. O. Box 372, Fort Fairfield (2)
 Kinder, Edward L., Jr., 1027 Washington St., Bath (8)
 King, Merrill J., 22 White St., Rockland (7)
 King, Merrill J., Jr., 22 White St., Rockland (7)
 Kinghorn, Charles W., 4 Wentworth St., Kittery (15)
 Kirk, William V., Eagle Lake (2)
 Knickerbocker, Charles H., 15 High St., Bar Harbor (5)
 Knowlton, Charles C., Ellsworth (5)
 Knowlton, Henry C., 245 Center St., Bangor (10)
 Konecki, John T., St. Mary's Hospital, Lewiston (1)
 Kopfmann, Harry, Deer Isle (5)
 Kramer, Henry F., Caribou Clinic, Caribou (2)

L

Labbe, Onil B., Van Buren (2)
 LaFlamme, Paul J., 78 Pine St., Lewiston (1)
 LaFond, Robert S., 258 Main St., Saco (15)
 Laney, Richard P., 50 Water St., Skowhegan (12)
 Langer, Ella, State House, Augusta (6)
 Lanni, John P., Paradise Rd., Bethel (9)
 Lape, C. Philip, 131 Chadwick St., Portland (3)
 Lapirow, Harry, 99 Main St., Kennebunk (15)
 Lappin, John J., 171 State St., Portland (3)

Larochelle, Joseph R., 42 Bacon St., Biddeford (15)
 Larrabee, Charles F., 48 Mt. Desert St., Bar Harbor (5)
 Larson, Karl V., East Machias (14)
 Laughlin, K. Alexander, 201 State St., Portland (3)
 Lawry, Oram R., Jr., 96 Limerock St., Rockland (7)
 Leary, Gerald C., 144 State St., Portland (3)
 Leddy, Percy A., Dir., Student Health Dept., University of
 Maine, Orono (10)
 Leigh, Kenneth E., 163 Court St., Portsmouth, N. H. (15)
 Leighton, Wilbur F., 192 State St., Portland (3)
 Leiter, Laban W., 175 Vaughan St., Portland (3)
 Lemaitre, Paul G., 268 Webster St., Lewiston (1)
 Lenfest, Stanley R., Waldoboro (8)
 Lepore, Anthony E., 72 Church St., Gardiner (6)
 Lesieur, Louis C., 66 Beach St., Saco (15)
 Levesque, Romeo J., Frenchville (2)
 Lezberg, Joseph, 33 Beecher Park, Bangor (10)
 Libby, Harold E., 310 Main St., Westbrook (3)
 Lidstone, Frederick B., 117 Goff St., Auburn (1)
 Lieberman, Arthur N., 180 Broadway, Bangor (10)
 Lightbody, Charles H., No. Main St., Guilford (11)
 Lincoln, John R., 22 Bramhall St., Portland (3)
 Lincourt, Armand S., 47 Allen St., Sanford (15)
 Loewenstein, George, Chebeague Island (7)
 Winter Address — Aripeka, Florida
 Logan, G. E. C., 131 State St., Portland (3)
 Lombard, Reginald T., 793 Main St., South Portland (3)
 Lord, Edwin M., 39 High St., Skowhegan (12)
 Lord, Maurice E., Dees Cabins, Lake Placid, Florida (12)
 Lorimer, Robert V., 148 State St., Portland (3)
 Love, Robert B., 75 Main St., Gorham (3)
 Lovely, David K., 46 Deering St., Portland (3)
 Lubell, Moses F., Thayer Hospital, Waterville (6)
 Luther, William C., West Sullivan (5)
 Lynn, Geraldine, 188 Russell St., Lewiston (1)

M

MacBride, Robert G., 25 Washington St., Lubec (14)
 Macdonald, Donald F., 263 State St., Bangor (10)
 MacDougall, Wilbur E., 186 Nowell Rd., Bangor (11)
 MacDougall, James A., 303 Penobscot St., Rumford (9)
 Mack, Francis X., 144 State St., Portland (3)
 MacVane, William L., Jr., 211 State St., Portland (3)
 Madigan, John B., Houlton (2)
 Magauddy, Michael M. P., 39 Old Orchard St., Old Orchard
 Beach (15)
 Magosci, Alexander W., York (15)
 Mahaney, William F., 338 Main St., Saco (15)
 Maier, Paul, 723 Congress St., Portland (3)
 Maltby, George L., 31 Bramhall St., Portland (3)
 Mann, David V., 47 Chestnut St., Camden (7)
 Manol, Jacob, 31 Deering St., Portland (3)
 Manter, Wilbur B., 1 Fern St., Bangor (10)
 Marquardt, Matthias, P.O. Box 724, State Hospital, Augusta
 (6)
 Marshall, Donald F., 142 High St., Portland (3)
 Marshall, Joseph A., 177 Main St., Waterville (6)
 Marsters, David W., Strong (4)
 Marston, Henry E., North Anson (12)
 Marston, Paul C., Kezar Falls (3)
 Martel, Cyprien L., Jr., 355 Pine St., Lewiston (1)
 Martin, Joseph E., 23 Water St., Livermore Falls (4)
 Martin, Ralf, 58 Deering St., Portland (3)
 Martin, Thomas A., 203 State St., Portland (3)
 Mason, Luther S., 109 State St., Bangor (10)
 Mason, Peter H., Millinocket Community Hospital, Millin-
 ocket (10)
 Mathews, Hugh J., Jr., 345 Water St., Gardiner (6)
 Matuzel, Jane, Western Maine Sanatorium, Green Mountain
 (1)
 Mazzacane, Walter D., Old Orchard (15)
 Mazzone, Giovanni, Mercy Hospital, Portland (3)
 Melendy, Oakley A., 21 Western Ave., Augusta (6)
 Melkis, Andrew, Pineland Hospital and Training Center,
 Pownal (3)
 Melnick, Jacob, 333 Congress St., Portland (3)
 Memmelaar, Joseph E., 54 Forest Ave., Bangor (10)
 Merrill, Urban H., 13 Water St., Newport (10)
 Methot, Frank P., 256 Lisbon St., Lewiston (1)

Michaud, Joseph C., 76 Main St., Waterville (6)
 Miller, Clark F., 46 Madison St., Auburn (1)
 Miller, George W., Norway National Bank Building, Norway
 (9)
 Miller, Hudson R., 11 Turner St., Auburn (1)
 Miller, Thor, 752 Main St., Westbrook (3)
 Milliken, Howard H., 105 Second St., Hallowell (6)
 Millington, Paul A., 44 Mountain St., Camden (7)
 Mills, Nathaniel, Harrison (9)
 Millstein, Hyman, Southwest Harbor (3)
 Miragliuolo, Leonard G., 10 Maple St., Bangor (10)
 Mitchell, Hazen C., Calais (14)
 Mock, George F., Arthur R. Gould Memorial Hospital,
 Presque Isle (2)
 Monkhouse, William A., 131 State St., Portland (3)
 Moore, Beryl M., Oxford (9)
 Moore, Roland B., 201 State St., Portland (3)
 Moore, Valentine J., Thayer Hospital, Waterville (6)
 Morin, Gerard L., 460 Main St., Lewiston (1)
 Morin, Harry F., 905 Middle St., Bath (8)
 Morissette, Russell A., 460 Main St., Lewiston (1)
 Morrell, Arch H., 67 Sewall St., Augusta (6)
 Morrison, Alvin A., 57 Deering St., Portland (3)
 Morrison, James B., Main St., Ashland (2)
 Morse, Edward K., 22 White St., Rockland (7)
 Moulton, Albert W., 180 State St., Portland (3)
 Moulton, Albert W., Jr., 180 State St., Portland (3)
 Moulton, Gardner N., 5 Grove St., Bangor (10)
 Moulton, Marion A. K., West Newfield (15)
 Munce, Richard T., 262 State St., Bangor (10)
 Mundie, Perley J., 111 Main St., Calais (14)
 Murphy, John J., 84 Portland St., South Berwick (15)
 Murphy, Norman B., 31 Western Ave., Augusta (6)
 Myer, John C., Nason College, Springvale (15)

Mc

McAdams, William R., 723 Congress St., Portland (3)
 McCann, Eugene C., 49 Deering St., Portland (3)
 McCormack, Roland L., 12 Bridge St., Norway (9)
 McCrum, Philip H., 188 State St., Portland (3)
 McEvoy, Charles D., Jr., 316 State St., Bangor (10)
 McFarland, Edward A., 159 Maine St., Brunswick (3)
 McIntire, Barron F., Jr., 13 W. Elm St., Yarmouth (3)
 McKay, Roland L., 57 Eastern Ave., Augusta (6)
 McLaughlin, Clarence R., 345 Water St., Gardiner (6)
 McLaughlin, Ivan E., 345 Water St., Gardiner (6)
 McLean, E. Allan, 29 Deering St., Portland (3)
 McLellan, William A., 87 Chestnut St., Camden (7)
 McManamy, Eugene P., 299 State St., Portland (3)
 McMichael, Morton, 73 Deering St., Portland (3)
 McNamara, Wesley C., 8 Lee St., Lincoln (10)
 McNeil, Harry D., 81 Silver Rd., Bangor (10)
 McQuillan, Arthur H., 177 Main St., Waterville (6)
 McQuoid, Robert M., 39 Columbia St., Bangor (10)
 McWethy, Wilson H., 31 Western Ave., Augusta (6)

N

Nackley, George N., 1 School St., Machias (14)
 Nadeau, J. Paul, 91 Pine St., Lewiston (1)
 Nadeau, Lawrence A., Vet. Adm. Hosp., So. Huntington Ave.,
 Jamaica Plains, Mass. (1)
 Nangle, Thomas P., West Paris (9)
 Nelson, Chesley W., 121 Main St., Norway (9)
 Nelson, Isaac, 1925 Quentin Rd., Brooklyn 29, N. Y. (11)
 Nesin, Bourcard, 10 Water St., Howland (10)
 Newcomb, Charles H., Clinton (6)
 Nichols, Arthur A., Edgecomb (8)
 Nickerson, Norman H., Greenville (11)
 Nielsen, Odd S., 85 Pleasant St., Dexter (11)

O

O'Connell, George B., 11 Lisbon St., Lewiston (1)
 O'Connor, Francis J., 4 Woodlawn St., Augusta (6)
 O'Donnell, Eugene E., 32 Deering St., Portland (3)
 Oestrich, Alfred, 89 Congress St., Rumford (9)
 Ohler, Robert L., Veterans Administration, Togus (6)
 O'Kane, Francis R., 122 Penobscot Ave., Millinocket (10)
 Olmsted, Burton L., 73 Deering St., Portland (3)

O'Meara, Edward S., Eastern Memorial Hospital, Ellsworth (5)
 Onat, Mustafa V., Main St., Port Clyde (7)
 Orbeton, Everett A., 131 State St., Portland (3)
 Osborne, John R., Veterans Administration, Togus (2)
 Osher, Harold L., 131 Chadwick St., Portland (3)
 Osler, Jay K., 74 Birch St., Bangor (10)
 O'Sullivan, William B., 331 Main St., Saco (15)
 Ottum, Alvin E., 150 State St., Portland (3)
 Ouellette, Marcel D., 114 Main St., Sanford (15)

P

Page, Rosario A., 18 Sweden St., Caribou (2)
 Palmer, Thomas H., Jr., 316 State St., Bangor (10)
 Parcher, George, 75 Main St., Ellsworth (5)
 Parker, James M., 18 Bramhall St., Portland (3)
 Parrot, Hadley, 74 Somerset St., Bangor (10)
 Patane, Joseph M., 256 Alfred St., Biddeford (15)
 Patterson, James, 1 Bay Rd., South Portland (3)
 Patton, Charles H., Jr., 11 McKee St., Brunswick (3)
 Pawle, Robert H., Steep Falls (3)
 Pearson, Henry, Brownfield (9)
 Pearson, John J., 100 So. Main St., Old Town (10)
 Penta, Walter E., 316 Woodford St., Portland (3)
 Perkins, Niles L., Jr., Oxford Paper Co., Rumford (9)
 Petterson, Herman C., Chebeague Island (3)
 Pfeiffer, Paul H., 14 Gilman St., Waterville (6)
 Philbrick, Maurice S., 292 Water St., Skowhegan (12)
 Pines, Philip, Maine St., Limestone (2)
 Platt, Anna, Beauchamp Rd., Rockport (7)
 Winter Address—110 Manatee Rd., Belleair, Clearwater, Fla.
 Plimpton, Jay R., 283 Water St., Augusta (6)
 Pogue, Jackson S., 529 Gilmore Ave., Trafford, Pa. (3)
 Poliner, Irving J., 235 State St., Portland (3)
 Polisner, Saul R., 143 Vaughan St., Portland (3)
 Pomerleau, Ovid F., 177 Main St., Waterville (6)
 Pomerleau, Rodolphe J. F., 27 Main St., Waterville (6)
 Pooler, Harold A., State Hospital, Bangor (10)
 Porter, Edward C., 489 State St., Bangor (10)
 Porter, Joseph E., 22 Bramhall St., Portland (3)
 Poulin, Albert A., Cherry Hill Dr., Waterville (6)
 Poulin, James E., 177 Main St., Waterville (6)
 Powell, Ralph C., Damariscotta (8)
 Pratt, George L., 7 Main St., Farmington (4)
 Pratt, Harold S., Livermore Falls (1)
 Pratt, Loring W., 177 Main St., Waterville (6)
 Price, Richard D., 8 Burns Ave., Caribou (2)
 Priest, Maurice A., 108 South Stone St., Deland, Fla. (6)
 Pritham, Fred J., Greenville Junction (11)
 Proctor, Ray A., 60 Vesta Circle, Caribou (2)
 Proctor, Thomas E., Boothbay Harbor (8)
 Proulx, Harvey J., 92 Pine St., Lewiston (1)
 Provost, Helen C., 48 Green St., Augusta (6)
 Provost, Pierre E., 48 Green St., Augusta (6)
 Purinton, Watson S., 15 Ohio St., Bangor (10)
 Purinton, William A., 15 Ohio St., Bangor (10)

R

Rand, Carleton H., 219 Oak St., Lewiston (1)
 Ray, Ferris S., 131 Chadwick St., Portland (3)
 Read, Seth H., 15 Church St., Belfast (13)
 Reed, Howard L., 68 Water St., Skowhegan (12)
 Reed, James W., 18 Main St., Farmington (4)
 Reel, John J., 59 So. Front St., Richmond (6)
 Reeves, Edward L., 179 Sabattus St., Lewiston (1)
 Reeves, Helene M., 179 Sabattus St., Lewiston (1)
 Renwick, Ward J., 102 Goff St., Auburn
 Winter Address—Colonial Hotel, St. Petersburg, Fla. (1)
 Reynolds, Arthur P., 420 Main St., Presque Isle (2)
 Reynolds, John F., 216 Main St., Waterville (6)
 Reynolds, Ralph L., 216 Main St., Waterville (6)
 Rice, William C., 7 Church St., Milltown, N. B. (14)
 Richards, Carl E., 34 Winter St., Sanford (15)
 Richards, Lee W., Jr., 21 Western Ave., Augusta (6)
 Richardson, C. Earle, 3 Cumberland St., Brunswick (3)
 Rideout, Samuel, 3 Green St., Fort Fairfield (2)

Ridlon, Magnus F., 99 Broadway, Bangor (10)
 Risley, Edward H., P.O. Box 143, Prides Crossing, Mass. (6)
 Robert, Roger J. P., 331 Main St., Saco (15)
 Robertson, George J., 33 College Ave., Waterville (6)
 Robinson, Carl M., Waite's Landing, R. 99, Portland (3)
 Robinson, Hugh P., 29 Deering St., Portland (3)
 Rock, Daniel A., 477 Main St., Lewiston (1)
 Root, John A., 22 White St., Rockland (7)
 Ross, H. Danforth, 34 Winter St., Sanford (15)
 Ross, Maurice, 372 Main St., Saco (15)
 Roussin, William T., 48 Bacon St., Biddeford (15)
 Rowe, Daniel M., Kirkwood Rd., Scarborough Beach (3)
 Rowe, Gunther H., 42 Main St., Livermore Falls (4)
 Rowe, Linwood M., 11 Franklin St., Rumford (9)
 Roy, Leopold O., 54 Pine St., Lewiston (1)
 Royal, Albert P., Jr., 82 Maine Ave., Rumford (9)
 Ruhlin, Carl W., 205 French St., Bangor (10)
 Runyon, William N., 283 Water St., Augusta (6)
 Russell, Daniel F. D., Leeds (1)
 Russell, Robert F., Penobscot (5)

S

Sager, George F., 18 Bramhall St., Portland (3)
 Sampson, Arthur H., Damariscotta (8)
 Sanders, Stephen W., 120 Main St., Winthrop (6)
 Sanger, George M., Eastern Memorial Hospital, Ellsworth (5)
 Santoro, Domenico A., 43 Deering St., Portland (3)
 Sapiro, Howard M., 171 State St., Portland (3)
 Saunders, Allen I., State Hospital, Augusta (6)
 Savage, Richard L., 4 Elm St., Fort Kent (2)
 Sawyer, Howard P., Jr., 22 Bramhall St., Portland (3)
 Schmidt, Lorrimer M., Veterans Administration, Togus (6)
 Schwartz, Carol, 35 Deering St., Portland (3)
 Scolten, Adrian H., 32 Deering St., Portland (3)
 Scribner, Herbert C., 259 Union St., Bangor (10)
 Sears, Harold G., Main St., Woodland (14)
 Seligman, Morris J., Veterans Administration, Togus (6)
 Selvaige, Irving L., Jr., 22 Bramhall St., Portland (3)
 Sever, James W., Cape Neddick (15)
 Sewall, Elmer M., 14 Park St., Orono (10)
 Sewall, Kenneth W., 2 School St., Waterville (6)
 Shannon, Charles E. G., 9 Park St., Waterville (6)
 Shapero, Benjamin L., 73 Broadway, Bangor (10)
 Shapiro, Morrill, 29 Deering St., Portland (3)
 Shelton, M. Tieche, 21 Western Ave., Augusta (6)
 Shems, Albert, 487 Main St., Lewiston (1)
 Shields, Daniel R., 369 Main St., Lewiston (1)
 Shields, Victor H., North Haven (7)
 Shippee, James N., 122 Main St., Winthrop (6)
 Shubert, Alice J., 317 State St., Bangor (10)
 Shubert, William M., 317 State St., Bangor (10)
 Shurman, Hans, 10 Spring St., Dexter (10)
 Sidwell-Thompson, Doris M., P. O. Box C, Pownal (3)
 Simpson, Margaret R., Bureau of Health, State House, Augusta (6)
 Skillin, Charles E., 690 Congress St., Portland (3)
 Skillin, Frederick W., 69 So. High St., Bridgton (3)
 Skinner, Peter S., 112 Ohio St., Bangor (10)
 Sleeper, Francis H., P.O. Box 724, State Hospital, Augusta (6)
 Small, Foster C., 169 High St., Belfast (13)
 Smith, Carroll H., Jr., Box 967, Presque Isle (2)
 Smith, Edgar J., 1 Park St., Fairfield (12)
 Smith, Gerald R., Ogunquit (15)
 Smith, Henry F., Jackman Station (12)
 Smith, Hugh A., Eastern Maine General Hospital, Bangor (10)
 Smith, Jacob, 118 Front St., Bath (8)
 Smith, Joseph I., 118 Front St., Bath (8)
 Smith, Kenneth E., Veterans Administration, Togus (6)
 Smith, Margaret S., Box 967, Presque Isle (2)
 Somerville, Robert B., 473 Main St., Presque Isle (2)
 Somerville, Wallace B., Mars Hill (2)
 Sommerfeld, Kurt A., 5 Brunswick Ave., Gardiner (6)
 Soule, Gilmore W., 22 White St., Rockland (7)
 Southern, Edward M., 34 Gilman St., Waterville (6)
 Sowles, Horace K., 413 Blackstrap Rd., Falmouth (3)
 Spear, William, 107 Main St., Lisbon Falls (1)
 Spellman, Francis A., Veterans Administration, Togus (6)
 Spencer, Jack, 31 Deering St., Portland (3)
 Stanhope, Charles N., Dover-Foxcroft (11)

Stanwood, Harold W., E. Stoneham (9)
 Stebbins, Arthur P., 131 State St., Portland (3)
 Steele, Charles W., 472 Main St., Lewiston (1)
 Stein, Ernest W., 72 Main St., Pittsfield (13)
 Stephenson, Richard B., 131 State St., Portland (3)
 Sterlin, Andre, 10 High St., Fort Kent (2)
 Stetson, Rufus E., Damariscotta (8)
 Stevens, Carl H., 18 Franklin St., Belfast (13)
 Stevens, Theodore M., 148 State St., Portland (3)
 Stewart, Delbert M., 15 Main St., South Paris (9)
 Stickney, Laura B., 10 Cutts Ave., Saco (15)
 Stinchfield, Allan J., 16 E. Chestnut St., Augusta (6)
 Stinchfield, Walter S., Court St., Skowhegan (12)
 Stitham, Linus J., 50 Main St., Dover-Foxcroft (11)
 Storer, Daniel P., 12 Deering St., Portland (3)
 Striar, Ronald R., 94 Essex St., Bangor (10)
 Strout, Warren G., 205 French St., Bangor (10)
 Stuart, Ralph C., Guilford (11)
 Sturtevant, Vaughn R., 33 College Ave., Waterville (6)
 Sullivan, George E., R. F. D. 1, Fairfield (12)
 Sullivan, John R., 340 North Main St., Brewer (10)
 Suyama, Eji, 58 W. Main St., Ellsworth (5)
 Sweatt, Linwood A., 48 Drummond St., Auburn (1)
 Swett, Alfred E., 308 Minot Ave., Auburn (1)
 Swett, Clyde I., 18 Sherman St., Island Falls (2)
 Sylvester, Stanley B., 1377 Washington Ave., Portland (3)
 Szelenyi, Ernest, Central Maine Sanatorium, Fairfield (12)
 Szendey, Andrew M., 26 Gray St., Madison (12)

T

Tabachnick, Henry M., 110 Park Ave., Portland (3)
 Tashiro, Sabro, 181 Highland Ave., Gardiner (6)
 Taylor, H. Lewis, 23 Church St., Dexter (10)
 Taylor, Paul E., 9 Wentworth St., Kittery (15)
 Taylor, William F., Providence Ave., Falmouth Foreside, R. 99, Portland (3)
 Tchao, Jou S., 82 Pine St., Lewiston (1)
 Telfeian, Alphonse, 690 Congress St., Portland (3)
 Temple, George L., 18 Franklin St., Belfast (13)
 Tetreau, William J., 131 Chadwick St., Portland (3)
 Thacher, Henry C., 117 Goff St., Auburn (1)
 Thaxter, Langdon T., Route 100, Portland (3)
 Thegen, W. Edward, Elm St., Bucksport (5)
 Theriault, Louis L., 197 Center St., Old Town (10)
 Thomas, Philip B., 205 French St., Bangor (10)
 Thompson, Cecil F., Dodge Rd., Phillips (4)
 Thompson, Philip P., Jr., 704 Congress St., Portland (3)
 Tibbetts, Otis B., 181 Gamage Ave., Auburn (1)
 Timberlake, Ralph M., Jr., Central Maine General Hospital, Lewiston (1)
 Titherington, John B., 209 State St., Portland (3)
 Todd, Albert C., 410 South Main St., Brewer (10)
 Torrey, Marcus A., 75 State St., Ellsworth (5)
 Torrey, Raymond L., Main St., Searsport (13)
 Tougas, Raymond A., 8 Cumberland St., Brunswick (3)
 Tounge, Harry G., Jr., 12 Union St., Camden (7)
 Tousignant, Camille, 111 Pine St., Lewiston (1)
 Toussaint, Leonid G., P. O. Box 9, Fort Kent (2)
 Towne, Charles E., 18 Common St., Waterville (6)
 Tracy, Mary J., Damariscotta (8)
 Trowbridge, Mason, Jr., 142 Pine St., Bangor (10)
 Turcotte, Guy N., 38 Deering St., Portland (3)
 Turgeon, Raphael F., 836 Main St., Westbrook (3)
 Turner, Harland G., R. F. D. 2, Norridgewock (12)
 Twaddle, Gard W., 57 Goff St., Auburn (1)
 Tze, Channam, MC 98 General Hospital, APO No. 34, c/o P. M. New York, N. Y. (1)

U

V

Vachon, Robert D., 34 Winter St., Sanford (15)
 Valentine, John B., 9 E. Main St., Dover-Foxcroft (11)
 Van Duyn, John, 205 French St., Bangor (10)

Van Loukhuyzen, Maurice, 31 Bramhall St., Portland (3)
 Ventimiglia, William A., 131 State St., Portland (3)
 Vickers, Martyn A., 268 State St., Bangor (10)
 Viger, Leopold A., 176 Elm St., Biddeford (15)
 Viles, Wallace E., Turner (1)
 Vogell, Frederick C., 18 Sweden St., Caribou (2)

W

Wadsworth, Richard C., 489 State St., Bangor (10)
 Wagner, Samuel L., 2 Holmes St., Winterport (10)
 Wakefield, Robert D., Central Maine General Hospital, Lewiston (1)
 Walker, George R., 128 Broadway, Bangor (10)
 Ward, John V., 131 State St., Portland (3)
 Warren, H. Draper, Caribou Clinic, Caribou (2)
 Wasgatt, Wesley N., 41 Talbot Ave., Rockland (7)
 Waterman, Dorothy, Waldoboro (7)
 Waterman, Richard, Waldoboro (7)
 Weatherbee, George B., Main St., Hampden (10)
 Weaver, Michael L., 36 Federal St., Brunswick (3)
 Webber, Isaac M., 29 Deering St., Portland (3)
 Webber, John R., Dark Harbor (2)
 Webber, M. Carroll, 735 Stevens Ave., Portland (3)
 Webber, Samuel R., Calais (14)
 Webber, Wallace E., 297 Main St., Lewiston (1)
 Webber, Wedgwood P., 376 Main St., Lewiston (1)
 Weed, Laura B., Eastern Maine General Hospital, Bangor (10)
 Weed, Lawrence L., Eastern Maine General Hospital, Bangor (10)
 Weeks, DeForest, 158 Pleasant Ave., Portland (3)
 Weisz, Hans, 196 Main St., Lincoln (10)
 Wellington, J. Foster, 655 Congress St., Portland (3)
 Westmeyer, Marion W., 858 Washington St., Bath (8)
 Weymouth, Currier C., 83 Main St., Farmington (4)
 Weymouth, Raymond E., 194 Main St., Bar Harbor (5)
 White, Leland M., 11 Riverview Ave., Caribou (2)
 White, Verdeil O., North Jay (4)
 White, William J., 1 Mitchell Rd., South Portland (3)
 Whitney, Byron V., 280 State St., Bangor (10)
 Whitney, Ray L., Cape Porpoise (15)
 Whittier, Alice A. S., 143 Neal St., Portland (3)
 Whitworth, John E., 116 Hammond St., Bangor (10)
 Wight, Donald G., 30 Mitchell Rd., South Portland (3)
 Wilbur, Herbert T., Jr., Southwest Harbor (5)
 Willard, Harold N., Thayer Hospital, Waterville (6)
 Williams, Edmund P., Oakland (6)
 Williams, Edward P., 72 Main St., Houlton (2)
 Williams, James A., 40 Pleasant St., Mechanic Falls (1)
 Williams, Ralph E., Main St., Freeport (3)
 Williams, Thomas W., 50 Union St., Ellsworth (5)
 Williamson, Elizabeth E., Blue Hill (5)
 Williamson, Russell G., Blue Hill Memorial Hospital, Blue Hill (5)
 Wilson, G. Ivan, 40 Court St., Houlton (2)
 Wilson, Harry M., 944 Middle St., Bath (8)
 Wilson, Robert W., Veterans Administration, Togus (6)
 Winchenbach, Francis A., 910 Washington St., Bath (8)
 Wolfahrt, Eugene P., 338 Main St., Saco (15)
 Wood, George W., III, 156 North Main St., Brewer (10)
 Woodcock, Allan, 35 Second St., Bangor (10)
 Woodcock, John A., 35 Second St., Bangor (10)
 Woodman, Arthur B., Falmouth Foreside (3)
 Worthing, Verla E., P. O. Box A, Thomaston (7)
 Wright, LaForest J., Corinna (10)
 Wyman, David S., 47 Deering St., Portland (3)

Y

Young, George E., 159 Water St., Skowhegan (12)
 Young, John, Jonesport (14)

Z

Zanca, Ralph, 86 Pine St., Lewiston (1)
 Zikel, Herbert M., High St., Wilton (4)
 Zolov, Benjamin, 296 Congress St., Portland (3)

Woman's Auxiliary to the Maine Medical Association

ANDROSCOGGIN COUNTY

Andrews, Mrs. S. L. 35 White St., Lewiston
Beaudet, Mrs. Simon C. 25 Webster St., Lewiston
Beeaker, Mrs. Vincent H. 85 Wood St., Lewiston
Beliveau, Mrs. Bertrand A. 56 Howe St., Lewiston
Beliveau, Mrs. Romeo A. 89 Pine St., Lewiston
Bernard, Mrs. Romeo A. 26 Beacon St., Lewiston
Branch, Mrs. Charles F. 69 Gamage Ave., Auburn
Carrier, Mrs. John W. 53 Campus Ave., Lewiston
Chapin, Mrs. Milan A. 237 Turner St., Auburn
Chevalier, Mrs. Paul R. 353 Pine St., Lewiston
Clapp, Mrs. Waldo A. 215 College St., Lewiston
Clapperton, Mrs. Gilbert 21 Ryder St., Lewiston
Cloutier, Mrs. Wilfrid A. 210 Sabattus St., Lewiston
Cox, Mrs. William V. 82 Gamage Ave., Auburn
Davis, Mrs. Wirt L. 14 Nelke Place, Lewiston
Fahey, Mrs. William J. 17 Frye St., Lewiston
Fishman, Mrs. Louis N. 223 Lake St., Auburn
Flanders, Mrs. Merton N. 370 Main St., Lewiston
Fortier, Mrs. Paul J. B. Barron Ave., Lewiston
Frost, Mrs. Robert A. 108 Summer St., Auburn
Gauvreau, Mrs. Horace L. 69 Horton St., Lewiston
Giguere, Mrs. Eustache N. 98 Webster St., Lewiston
Goldman, Mrs. Morris E. 524 Main St., Lewiston
Goodwin, Mrs. Ralph A., Sr. 56 Denison St., Auburn
Green, Mrs. Ross W. 95 Whitney St., Auburn
Greene, Mrs. John P. R.F.D. No. 2, Auburn
Greene, Mrs. Merrill S. F. 466 Main St., Lewiston
Gross, Mrs. Leroy C. 19 Goff St., Auburn
Haas, Mrs. Rudolph 484 Main St., Lewiston
Hiebert, Mrs. Joelle C., Jr. R.F.D. No. 2, Auburn
Higgins, Mrs. Everett C. 149 College St., Lewiston
Hirshler, Mrs. Max 25 Bardwell St., Lewiston
Horsman, Mrs. Donald H. 50 Goff St., Auburn
James, Mrs. Chakmakis 47 Howe St., Lewiston
James, Mrs. John A. R.F.D. No. 2, Auburn
Konecki, Mrs. John T. R.F.D. No. 2, Auburn
LaFlamme, Mrs. Paul J. Delcliff Lane, Lewiston
Lemaitre, Mrs. Paul G. 268 Webster St., Lewiston
Lidstone, Mrs. Frederick B. R.F.D. No. 2, Auburn
Martel, Mrs. Cyprien L., Jr. 345 Pine St., Lewiston
Methot, Mrs. Frank P. 1 Bellegarde Circle, Lewiston
Miller, Mrs. Clark F. 46 Madison St., Auburn
Morin, Mrs. Gerard L. 38 Hamel St., Lewiston
Morissette, Mrs. Russell A. 69 Western Promenade, Auburn
Nadeau, Mrs. J. Paul 91 Pine St., Lewiston
Nadeau, Mrs. Lawrence A. 92 Pine St., Lewiston
Rand, Mrs. Carleton H. 166 College St., Lewiston
Renwick, Mrs. Ward J. 102 Goff St., Auburn
Rock, Mrs. Daniel A. 477 Main St., Lewiston
Shems, Mrs. Albert 487 Main St., Lewiston
Spear, Mrs. William 107 Main St., Lisbon Falls
Steele, Mrs. Charles W. 472 Main St., Lewiston
Sweatt, Mrs. L. A. 48 Drummond St., Auburn
Thacher, Mrs. Henry C. Upper Turner St., Auburn
Tibbetts, Mrs. Otis B. R.F.D. No. 2, Auburn
Timberlake, Mrs. Ralph M., Jr. 24 Dexter Ave., Auburn
Twaddle, Mrs. Gard W. 57 Goff St., Auburn
Wakefield, Mrs. Robert D. 18 White St., Lewiston
Webber, Mrs. Wedgwood P. 376 Main St., Lewiston

AROOSTOOK COUNTY

Albert, Mrs. Armand Main St., Van Buren
Aungst, Mrs. Melvin R. Fort Kent
Boone, Mrs. Storer W. Third St., Presque Isle
Brown, Mrs. Stephen S. Mars Hill
Burr, Mrs. Charles G. 90 Court St., Houlton
Carton, Mrs. Arthur K. 7 Park St., Houlton
Donahue, Mrs. Clement L. 13 Collins St., Caribou
Donahue, Mrs. Gerald H. Presque Isle

Faucher, Mrs. Francois J. Grand Isle
Giberson, Mrs. Raymond G. Hillside, Presque Isle
Graves, Mrs. Robert A. 3 Green St., Fort Fairfield
Gregory, Mrs. Frederick J. 16 High St., Caribou
Griffiths, Mrs. Eugene B. Main St., Presque Isle
Harvey, Mrs. Thomas G. 11 High St., Caribou
Kimball, Mrs. Herrick C. Fort Fairfield
Kirk, Mrs. William V. Eagle Lake
Mock, Mrs. George F. 33 Church St., Presque Isle
Page, Mrs. Rosario A. Riversbend Road, Caribou
Pines, Mrs. Philip Limestone
Reynolds, Mrs. Arthur P. 41 Barton St., Presque Isle
St. Pierre, Mrs. Charles E. Van Buren
Savage, Mrs. Richard L. Fort Kent
Somerville, Mrs. Robert B. Presque Isle
Sterlin, Mrs. Andre Fort Kent
Swett, Mrs. Clyde I. Island Falls
Toussaint, Mrs. Leonid G. Fort Kent
Vogell, Mrs. Frederick C. Pioneer Ave., Caribou
Warren, Mrs. H. Draper 27 N. Main St., Caribou
White, Mrs. Leland M. Caribou
Wilson, Mrs. G. Ivan 102 Court St., Houlton

CUMBERLAND COUNTY

Agan, Mrs. Robert W. 3 Rocky Hill Rd., Cape Elizabeth
Ansell, Mrs. Harvey B. 136 Baxter Blvd., Portland
Aranson, Mrs. Albert 177 Caleb St., Portland
Asali, Mrs. Louis A. Kirkwood Rd., Scarborough
Asherman, Mrs. Edward G. Falmouth Rd., Falmouth
Babalian, Mrs. Leon Surf Rd., Cape Cottage
Baldini, Mrs. Elio 89 West St., Portland
Baldwin, Mrs. Warren C. Andrews Rd., Falmouth Foreside
Beunnett, Mrs. Eben T. Shore Rd., Cape Elizabeth
Bidwell, Mrs. Robinson L. Casco Ter., Falmouth Foreside
Bischoffberger, Mrs. John M. Naples
Blaisdell, Mrs. Elton R. 35 Penrith Rd., Portland
Bove, Mrs. Louis G. 95 West St., Portland
Branson, Mrs. Sidney R. Gray Rd., South Windham
Broggi, Mrs. Frank S. 18 Neal St., Portland
Brown, Mrs. Luther A. 13 Deering St., Portland
Burnett, Mrs. Claude A. Delano Park, Cape Elizabeth
Burrage, Mrs. William C. 304 Spring St., Portland
Capron, Mrs. Charles W. Hunnewell Rd., Scarborough
Casey, Mrs. William L. 146 Clinton St., Portland
Clark, Mrs. Frederick B. State Rd., Falmouth Foreside
Clarkin, Mrs. Charles P. 64 Brookside Rd., Portland
Clemett, Mrs. Arthur R. 1 Ship Channel Rd., So. Portland
Cole, Mrs. Donald P. 55 Cottage Farms Rd., Cape Elizabeth
Crane, Mrs. Lawrence 265 Western Promenade, Portland
Cummings, Mrs. George O. 583 Shore Rd., Cape Elizabeth
Cummings, Mrs. George O., Jr. Orchid Rd., Cape Elizabeth
Curtis, Mrs. Harry L. 45 Wellington Rd., Portland
Darche, Mrs. Albert A. 782 Main St., Westbrook
Davies, Mrs. Lloyd G. Fryeburg
Dionne, Mrs. Maurice J. 28 Cumberland St., Brunswick
Dooley, Mrs. Francis M. 53 Deering St., Portland
Dorsey, Mrs. F. Donald 52 Deering St., Portland
Douphinett, Mrs. Otis J. Maple Ave., Scarborough
Drake, Mrs. Emerson H. State Rd., Cumberland Foreside
Drake, Mrs. Eugene H. County Rd., South Gorham
Drummond, Mrs. Joseph B. Ship Channel Rd., So. Portland
Dunham, Mrs. Carl E. 1122 Washington Ave., Portland
Dyhrberg, Mrs. Norman E. 331 Main St., Cumberland Mills
Earnhardt, Mrs. Joseph B. 55 Stroudwater St., Westbrook
Eppinger, Mrs. Ernst 52 Belmont St., Portland
Fagone, Mrs. Francis A. 173 Bolten St., Portland
Ferguson, Mrs. Franklin F. Surf Rd., Cape Cottage
Fish, Mrs. Nicholas State Rd., Cumberland Foreside
Fogg, Mrs. Philip S. 173 Pleasant Ave., Portland

Fox, Mrs. Francis H. 83 West St., Portland
 Gates, Mrs. Clifford W. Flaggy Meadow Rd., Gorham
 Geer, Mrs. Charles R. 212 Vaughan St., Portland
 Geer, Mrs. George I., Sr. 299 Woodford St., Portland
 Geer, Mrs. George I., Jr. 58 Clifford St., South Portland
 Gehring, Mrs. Edwin W. 284 Ocean Ave., Portland
 Gibbons, Mrs. John F. 20 Elmwood Rd., Cape Elizabeth
 Gilbert, Mrs. Frank Y. 102 Emery St., Portland
 Glassmire, Mrs. Charles R. 65 Drew Rd., South Portland
 Gcduti, Mrs. Richard J. Route No. 99, Portland
 Good, Mrs. Philip G. 126 Fickett St., South Portland
 Hallett, Mrs. George W., Jr. Shore Rd., Cape Elizabeth
 Haney, Mrs. Oramel 74 Deering St., Portland
 Hanley, Mrs. Daniel F. 58 Federal St., Brunswick
 Hawkes, Mrs. Richard S. 174 Longfellow St., Portland
 Hecht, Mrs. Henry 326 Stevens Ave., Portland
 Heifetz, Mrs. Ralph 58 Coyle St., Portland
 Hill, Mrs. Douglas R. 2 State Ave., Cape Elizabeth
 Hinckley, Mrs. Harris Shore Rd., Cape Elizabeth
 Holt, Mrs. C. Lawrence State Rd., Falmouth Foreside
 Hudson, Mrs. Henry A. 11 Gage St., Bridgton
 Ives, Mrs. Howard R. 56 Bowdoin St., Portland
 Jacobson, Mrs. Payson B. 295 Brighton Ave., Portland
 Johnson, Mrs. Albert C. Shore Acres, Cape Elizabeth
 Johnson, Mrs. Oscar R. 18 Deering St., Portland
 Knowles, Mrs. Robert M. Cumberland Foreside
 Lape, Mrs. C. Philip 132 Chadwick St., Portland
 Leary, Mrs. Gerald C. 7 Redlon St., Portland
 Leighton, Mrs. Wilbur F. 118 Beacon St., Portland
 Lincoln, Mrs. John R. R.F.D. No. 5, Portland
 Logan, Mrs. G. E. Clifford Rt. No. 99, Shore Line Dr., Falmouth Foreside
 Lombard, Mrs. Reginald T. 793 Main St., Portland
 Lorimer, Mrs. Robert V. 1 Ocean Rd., South Portland
 Lovely, Mrs. David K. 52 Berkeley St., Portland
 Mack, Mrs. Francis X. 1473 Westbrook St., Portland
 MacVane, Mrs. William L., Jr. 25 Storer St., Portland
 Maltby, Mrs. George L. Bramhall Field, Falmouth Foreside
 Marshall, Mrs. Donald F. Surf Rd., Cape Cottage
 Martin, Mrs. Ralf Merrill Rd., Falmouth
 Martin, Mrs. Thomas A. 1415 Forest Ave., Portland
 Miller, Mrs. Thor 732 Main St., Westbrook
 Monkhouse, Mrs. William A. 29 Bowdoin St., Portland
 Morrison, Mrs. Alvin A. 165 Glenwood Ave., Portland
 Moulton, Mrs. Albert W., Jr. 97 Vaughan St., Portland
 Moulton, Mrs. W. Bean 29 Longfellow St., Portland
 McCann, Mrs. Eugene C. 4 Woodmont St., Portland
 McCrum, Mrs. Philip H. 15 Fairlawn Ave., South Portland
 McIntire, Mrs. Barron F., Jr. 13 W. Elm St., Yarmouth
 McLean, Mrs. E. Allan Foreside Rd., Falmouth Foreside
 McManamy, Mrs. Eugene P. Surf Rd., Cape Cottage
 McMichael, Mrs. Morton Windham Hill, Windham
 Nichols, Mrs. Estes 59 West St., Portland
 O'Donnell, Mrs. Eugene E. 12 Cottage Farms Rd., Cape Elizabeth
 Olmsted, Mrs. Burton L. 86 Oakhurst Rd., Cape Elizabeth
 Orberton, Mrs. Everett A. 45 Channel Rd., South Portland
 Osher, Mrs. Harold L. 131 Chadwick St., Portland
 Ottum, Mrs. Alvin E. Falmouth Rd., Falmouth
 Parker, Mrs. James M. 229 Foreside Rd., Falmouth Foreside
 Pawle, Mrs. Robert H. Steep Falls
 Penta, Mrs. Walter E. 316 Woodford St., Portland
 Petterson, Mrs. Herman C. Chebeague Island
 Porter, Mrs. Joseph E. Falmouth Rd., R.F.D. 4, Portland
 Pudor, Mrs. G. A. 15 Sheffield St., Portland
 Sager, Mrs. George F. Rock Hill, Shore Rd., Cape Elizabeth
 Santoro, Mrs. Domenico A. 43 Deering St., Portland
 Sapiro, Mrs. Howard M. 44 Pitt St., Portland
 Sawyer, Mrs. Howard P., Jr. 672 Ocean Ave., Portland
 Selvage, Mrs. Irving L., Jr. 88 Ivie Rd., Cape Elizabeth
 Shanahan, Mrs. William H. 1231 Forest Ave., Portland
 Shapiro, Mrs. Morrill 95 Caleb St., Portland
 Skillin, Mrs. Charles E. 119 Neal St., Portland
 Spencer, Mrs. Jack Route No. 99, Portland
 Stebbins, Mrs. Arthur P. 996 Sawyer St., So. Portland
 Stephenson, Mrs. Richard B. 12 Woodland Rd., Cape Elizabeth
 Storer, Mrs. Daniel P. 108 Fessenden St., Portland
 Sylvester, Mrs. Allan W. 396 Ocean Ave., Portland
 Sylvester, Mrs. Stanley B. 1346 Westbrook St., Portland
 Tabachnick, Mrs. Henry M. 110 Park Ave., Portland
 Taylor, Mrs. William F. Providence Ave., Falmouth Foreside

Tetreau, Mrs. William J. 5 Runnells St., Portland
 Thaxter, Mrs. Langdon T.
 Route No. 100, Cumberland Foreside
 Thompson, Mrs. Philip P., Jr. 7 Ship Channel Rd., So. Portland
 Titherington, Mrs. John B. Brook Rd., West Falmouth
 Tougas, Mrs. Raymond A. 8 Cumberland St., Brunswick
 Turcotte, Mrs. Guy N. 6 Oakwood Rd., Cape Elizabeth
 Turgeon, Mrs. Raphael F. 68 Lyman St., Westbrook
 Van Lonkhuyzen, Mrs. Maurice 645 Ocean Ave., Portland
 Ventimiglia, Mrs. William A. 5 Bartley Ave., Portland
 Webber, Mrs. Isaac M. Penrith Rd., Portland
 Weeks, Mrs. DeForest 158 Pleasant Ave., Portland
 Wellington, Mrs. J. Foster 396 Brighton Ave., Portland
 White, Mrs. William J. 1 Mitchell Rd., South Portland
 Wight, Mrs. Donald G. 30 Mitchell Rd., South Portland
 Williams, Mrs. Ralph E. Main St., Freeport
 Woodman, Mrs. George M. 826 Main St., Westbrook
 Wyman, Mrs. David S. 7 Bayview Ave., South Portland
 Zolov, Mrs. Benjamin 430 Baxter Blvd., Portland

FRANKLIN COUNTY

Bowne, Mrs. Hays G. 9A Main St., Farmington
 Brinkman, Mrs. Harry 47 Perham St., Farmington
 Chase, Mrs. Philip B. Main St., Farmington
 Colley, Mrs. Maynard B. Main St., Wilton
 Covert, Mrs. S. Burton Kingfield
 Duffy, Mrs. Wallace H. 100 Main St., Farmington
 Eastman, Mrs. Charles W. 15 Millet St., Livermore Falls
 Fichtner, Mrs. Paul A. 6 Pleasant St., Rangeley
 Fiorica, Mrs. Gaetano T. Livermore Falls
 Floyd, Mrs. Paul E. 2 Middle St., Farmington
 Friend, Mrs. John W. 68 High St., Farmington
 Marsters, Mrs. David W. Strong
 Martin, Mrs. Joseph E. 43 High St., Livermore Falls
 Pratt, Mrs. Harold S. 18 Church St., Livermore Falls
 Reed, Mrs. James W. Main St., Farmington
 Rowe, Mrs. Gunther H. 42 Main St., Livermore Falls
 Thompson, Mrs. Cecil F. Phillips
 Weymouth, Mrs. Currier C. Main St., Farmington

KENNEBEC COUNTY

Barnard, Mrs. John M. H. 80 Highland Ave., Gardiner
 Brann, Mrs. Henry A. 38 Fairview Ave., Augusta
 Crawford, Mrs. Albert S. Veterans Administratin, Togus
 Crawford, Mrs. Joseph R. 6 Macomber Ave., Augusta
 Dachslager, Mrs. Philip 55 Capitol St., Augusta
 Daniels, Mrs. Donald H. R.R. 1, Readfield
 Darlington, Mrs. Brinton T. Westwood Rd., Augusta
 Denison, Mrs. John D. 105 Brunswick Ave., Gardiner
 Fallon, Mrs. Anne 52 Lincoln St., Augusta
 Fallon, Mrs. Richard N. Westwood Rd., Augusta
 Farrell, Mrs. Chalmers G. 68 Central St., Gardiner
 Gingras, Mrs. Adolphe J. 113 Northern Ave., Augusta
 Gingras, Mrs. Napoleon J. 124 State St., Augusta
 Herring, Mrs. Leon D. 1 Western Ave., Winthrop
 Jackson, Mrs. Elmer H. 47 Chapel St., Augusta
 Lepore, Mrs. Anthony E. 76 School St., Gardiner
 Mathews, Mrs. Hugh J., Jr. 75 Brunswick Ave., Gardiner
 Melendy, Mrs. Oakley A. Westwood Rd., Augusta
 Milliken, Mrs. Howard H. 105 Second St., Hallowell
 Mitchell, Mrs. Roscoe L. 111 Western Ave., Augusta
 Moore, Mrs. Arnold W. 112 Eastern Ave., Augusta
 Morrell, Mrs. Arch H. 67 Sewall St., Augusta
 Murphy, Mrs. Norman B. 19 So. Chestnut St., Augusta
 McLaughlin, Mrs. Clarence R., 152 Brunswick Ave., Gardiner
 McLaughlin, Mrs. Ivan E. Lewiston Rd., Gardiner
 McQuillan, Mrs. Arthur H. 6 Dalton St., Waterville
 McWethy, Mrs. Wilson H. 22 Sewall St., Augusta
 O'Connor, Mrs. Francis J. 4 Woodlawn St., Augusta
 O'Connor, Mrs. William 43 Green St., Augusta
 Ohler, Mrs. Robert L. East Winthrop
 Plimpton, Mrs. Jay R. 12 Blaine Ave., Augusta
 Robertson, Mrs. George J. 33 College Ave., Waterville
 Russell, Mrs. Walter A. 5 Chestnut St., Hallowell
 Sanders, Mrs. Stephen W. 120 Main St., Winthrop
 Shippee, Mrs. James N. Main St., Winthrop
 Sleeper, Mrs. Francis H. Box 724, Augusta
 Sommerfeld, Mrs. Kurt A. 182 Dresden Ave., Gardiner
 Stinchfield, Mrs. Allan J. 6 Warren St., Hallowell

KNOX COUNTY

Adams, Mrs. Lester 9 Knox St., Thomaston
 Allen, Mrs. Robert L. Bear Hill, Rockport
 Apollonio, Mrs. Howard L. Mechanic St., Rockport
 Brouwer, Mrs. Johan 8 Mountain St., Camden
 Dennison, Mrs. Frederick C. 52 Main St., Thomaston
 Eddy, Mrs. Robert H. 23A Summer St., Rockland
 Hopping, Mrs. John S. Beaver Lodge Rd., Hope
 Jameson, Mrs. C. Harold Chestnut St., Camden
 Kibbe, Mrs. Frank W. Lincolnville
 King, Mrs. Merrill J. 89 Talbot Ave., Rockland
 King, Mrs. Merrill J., Jr. West Rockport
 Lawry, Mrs. Oram K., Jr. 96 Limerock St., Rockland
 Mann, Mrs. David V. 47 Chestnut St., Camden
 Millington, Mrs. Paul A. 44 Mountain St., Camden
 Morse, Mrs. Edward K. 39 High St., Camden
 McLellan, Mrs. William A. Chestnut St., Camden
 Root, Mrs. John A. 38 Union St., Rockland
 Soule, Mrs. Gilmore W. 52 Gay St., Rockland
 Tounge, Mrs. Harry G., Jr. 12 Union St., Camden
 Wasgatt, Mrs. Wesley N. 41 Talbot St., Rockland

OXFORD COUNTY

Akerberg, Mrs. Ake Maple St., South Paris
 Aucoin, Mrs. Peter B. 87 Congress St., Rumford
 Dixon, Mrs. Walter G. 16 Deering St., Norway
 Elsemore, Mrs. Dexter E. Dixfield
 Greene, Mrs. John A. 96 Congress St., Rumford
 Harper, Mrs. Harry L. 17 Main St., South Paris
 Hubbard, Mrs. Roswell E. Waterford
 Kadi, Mrs. Frances J. Western Maine San., Greenwood Mountain
 Lanni, Mrs. John P. Bethel
 MacDougall, Mrs. James A. 303 Penobscot St., Rumford
 Miller, Mrs. George W. Main St., Norway
 Nangle, Mrs. Thomas P. West Paris
 Oestrich, Mrs. Alfred 89 Congress St., Rumford
 Rowe, Mrs. Linwood M. 246 Penobscot St., Rumford

PENOBSCOT COUNTY

Adams, Mrs. Asa C. 99 Forest Ave., Orono
 Adams, Mrs. Winford C. State Rd., Holden
 Ames, Mrs. Forrest B. 532 North Main St., Brewer
 Babcock, Mrs. Albert L. 38 Silver Rd., Bangor
 Babcock, Mrs. Edward B. 115 Wilson St., Brewer
 Barrett, Mrs. Robert J., Jr. 127 Somerset St., Bangor
 Blackburn, Mrs. Nelson P. Winterport
 Blaisdell, Mrs. William B. Penobscot Ter., Brewer
 Bridges, Mrs. Donald E. 765 Hammond St., Bangor
 Brown, Mrs. Lloyd 427 Garland St., Bangor
 Burke, Mrs. John E. 353 State St., Bangor
 Burke, Mrs. Paul W. Newport
 Butler, Mrs. Harry 77 Broadway, Bangor
 Chason, Mrs. Sidney 173 Pine St., Bangor
 Clement, Mrs. James D., Jr. 99 Broadway, Bangor
 Clough, Mrs. Dexter J., 2nd Bucksport
 Comeau, Mrs. Wilfred 115 Main St., Orono
 Cornell, Mrs. Robert C. Forest Ave., Orono
 Coulton, Mrs. Donald 326 State St., Bangor
 Cutler, Mrs. Lawrence M. 33 Grove St., Bangor
 Duffey, Mrs. Richard V. 76 Washington St., Brewer
 Emerson, Mrs. W. Merritt 131 State St., Bangor
 Emery, Mrs. Frederick C. 242 Cedar St., Bangor
 Fergus, Mrs. Andrew 247 Larkin St., Bangor
 Gaillard, Mrs. Richard A. 91 Grove St., Bangor
 Hall, Mrs. Walter L. H. 50 N. 4th St., Orono
 Hamlin, Mrs. Irvin E. East Millinocket
 Hedin, Mrs. Carl J. Penobscot Ter., Brewer
 Hill, Mrs. Allison K. 113 Somerset St., Bangor
 Houlihan, Mrs. John S. 66 Howard St., Bangor
 Irwin, Mrs. Carl W. 39 West Broadway, Bangor
 Lezberg, Mrs. Joseph 33 Beecher Park, Bangor
 Lieberman, Mrs. Arthur N. 180 Broadway, Bangor
 Miragliuolo, Mrs. Leonard G. 20 Elm St., Bangor
 Moulton, Mrs. Gardner N. Main Road, Orono
 Munce, Mrs. Richard T. 410 French St., Bangor
 McNeil, Mrs. Harry D. 81 Silver Rd., Bangor
 McQuoid, Mrs. Robert M. 91 Grove St., Bangor
 Osler, Mrs. Jay K. State St., Veazie

Palmer, Mrs. Thomas H., Jr. 490 State St., Bangor
 Parrot, Mrs. Hadley 74 Somerset St., Bangor
 Pearson, Mrs. John J. Box 104, Milford
 Pooler, Mrs. Harold A. Bangor State Hospital, Bangor
 Purinton, Mrs. William A. 134 Kenduskeag Ave., Bangor
 Ridlon, Mrs. Magnus F. Main St., East Hampden
 Ruhlin, Mrs. Carl W. Hampden Highlands
 Sewall, Mrs. Elmer M. 14 Park St., Orono
 Shapero, Mrs. Benjamin L. 99 Norway Rd., Bangor
 Shurman, Mrs. Hans Dexter
 Silsby, Mrs. Samuel 11 Ohio St., Bangor
 Skinner, Mrs. Peter S. 112 Ohio St., Bangor
 Strout, Mrs. Warren G. 125 Norway Rd., Bangor
 Sullivan, Mrs. John R. 340 North Main St., Brewer
 Taylor, Mrs. H. Lewis Dexter
 Thomas, Mrs. Philip B. 127 Maple St., Bangor
 Vickers, Mrs. Martyn A. 72 West Broadway, Bangor
 Walker, Mrs. George R. East Corinth
 Weisz, Mrs. Hans Lincoln
 Whitney, Mrs. Byron V. 280 State St., Bangor
 Whitworth, Mrs. John E. 40 Garland St., Bangor
 Woodcock, Mrs. Allan 16 Beecher Park, Bangor

PISCATAQUIS COUNTY

Bradbury, Mrs. Francis W. Dover-Foxcroft
 Carde, Mrs. Albert M. Milo
 Curtis, Mrs. John B. Milo
 Howard, Mrs. George C. Guilford
 Johnson, Mrs. James H., Jr. Milo
 Lightbody, Mrs. Charles H. Guilford
 Nickerson, Mrs. Norman H. Greenville
 Pritham, Mrs. Fred J. Greenville Junction
 Stanhope, Mrs. Charles N. Dover-Foxcroft
 Stitham, Mrs. Linus J. Dover-Foxcroft
 Stuart, Mrs. Ralph C. Guilford
 Valentine, Mrs. John B. 9 E. Main St., Dover-Foxcroft

YORK COUNTY

Anton, Mrs. Thomas 4 Fernald St., Old Orchard
 Cobb, Mrs. Stephen A. 23 Lebanon St., Sanford
 Cuneo, Mrs. Kenneth J. 31 Summer St., Kennebunk
 Dionne, Mrs. William E. Springvale
 Downing, Mrs. J. Robert 35 Summer St., Kennebunk
 Drummond, Mrs. S. Dunton Bar Mills
 Fortier, Mrs. Andre P. 68 Foss St., Biddeford
 Haas, Mrs. Carl M. 415 Main St., Saco
 Hill, Mrs. Paul S., Jr. 319 Main St., Saco
 Hoffman, Mrs. Alvin A. York
 Holland, Mrs. Edward W. Box 564, Springvale
 Hopkins, Mrs. Herbert J. 24 Portland Ave., Old Orchard
 Houle, Mrs. Marcel P. 34 Union St., Biddeford
 Jacobson, Mrs. Payson B. 13 Bacon St., Biddeford
 Jellerson, Mrs. Leon R. North Berwick
 Johnston, Mrs. James S. York
 LaFond, Mrs. Robert S. 23 Weymouth St., Saco
 Lapirow, Mrs. Harry 99 Main St., Kennebunk
 Leary, Mrs. Gerald C. 7 Redlon St., Portland
 Lincourt, Mrs. Armand S. 263 Main St., Sanford
 Macdonald, Mrs. James H. 103 Main St., Kennebunk
 Magocsi, Mrs. Alexander W. York
 Mahaney, Mrs. William F. 338 Main St., Saco
 Myer, Mrs. John C. Elm St., North Berwick
 O'Sullivan, Mrs. William B. South St., Biddeford
 Ouellette, Mrs. Marcel D. 7 Park St., Sanford
 Richards, Mrs. Carl E. Alfred
 Robert, Mrs. Roger J. P. 38 May St., Biddeford
 Ross, Mrs. H. Danforth 12 Storer St., Sanford
 Ross, Mrs. Maurice 372 Main St., Saco
 Smith, Mrs. Gerald R. Ogunquit
 Vachon, Mrs. Robert D. 34 Winter St., Sanford
 Viger, Mrs. Leopold A. 18 Gertrude Ave., Biddeford
 Wolfahrt, Mrs. Eugene P. 24 Hall Ave., Saco

MEMBERS-AT-LARGE

Larson, Mrs. Karl V. East Machias, Washington
 MacBride, Mrs. Robert G. Lubec, Washington
 Winchenbach, Mrs. Francis A. 910 Washington St., Bath,
 Lincoln-Sagadahoc

